Community pharmacy involvement in the care of drug misusers -- A quantitative and qualitative study of practice in the south west of England

Britton, Rachel Margaret

Award date:
2007

Awarding institution:
University of Bath

Community Pharmacy Involvement in the Care of Drug Misusers - a Quantitative and Qualitative Study of Practice in the South West of England

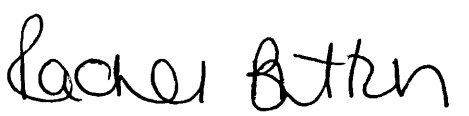
Rachel Margaret Britton

M.Sc. Bristol, 1997
B.Pharm (Hons) London, 1995

A Thesis Presented for the Degree of Doctor of Philosophy

Department of Pharmacy and Pharmacology
University of Bath

February 2007



ProQuest LLC
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106-1346

For Carl and George

DECLARATION

I hereby **declare,** that with the exception of the assistance acknowledged within, the composition of this thesis and the work presented in it are entirely my own venture and has not been accepted in any previous application for a degree.

Rachel Britton

June 2007

ACKNOWLEDGEMENTS

Special thanks go to my supervisors Dr Jenny Scott, Department of Pharmacy and Pharmacology and Professor Richard Velleman, Mental Health R&D Unit at the University of Bath. Their help, advice and continuing enthusiasm for the project is greatly appreciated.

Grateful thanks go to the Department of Pharmacy and Pharmacology, the Sir Hugh Linstead Fellowship (administered by the Practice Research Trust at the Royal Pharmaceutical Society) and the Harold and Marjorie Moss Charitable Trust for funding the research.

I gratefully acknowledge the support of the members of the Clinical Pharmacy and Pharmacy Practice group with particular thanks to Dr Jane Sutton for her help and advice in analysing the qualitative data.

Thanks also to Rita Walford for transcribing the interviews and John and Rosemary Britton for their help in assembling the envelopes for the postal questionnaire.

I am indebted to the community pharmacists who took time to complete the questionnaire and participate in the interviews and to the drug misusers who consented to be interviewed.

Finally, this project was inspired by the drug users who I have met during my professional career. I thank them for this inspiration and hope this work will benefit them.

ABSTRACT

Aims

The aims of this project were to (i) examine the extent and nature of pharmacy services for drug misusers in the south west of England; and (ii) to investigate the views and experiences of pharmacists who provide and clients who use such services with a view to describe the opportunities for improving and extending pharmacy based drug misuse services.

Methods

The extent of pharmacy based drug misuse services, pharmacist attitude and knowledge on aspects of drug misuse were examined using a self-completion questionnaire that was sent to 903 community pharmacies in the south west of England. The views and experiences of pharmacists' (n=31) and service users (n=15) were examined using qualitative semi-structured in depth interviews.

Results

The response rate to the postal questionnaire was 78.3% (n=707). 19.1% (n=135) respondents were prepared to sell injecting equipment and currently did so. One hundred and seven respondents (15.1%) participated in a needle/ syringe exchange scheme. 69.2% (n=489) reported dispensing methadone with 70.1% of these (n=434) reporting that they supervised consumption.

Pharmacists who provided drug misuse services had a more positive attitude score, than those who did not, and pharmacists who sold injecting or who participated in a needle exchange scheme tended to have a higher level of knowledge on aspects of drug misuse.

Interviews with pharmacists' revealed that important factors in the delivery of drug misuse services were the sharing of information with other health care professionals, support to provide services, and training. The prescribing of controlled drugs by pharmacists was identified as a possible extension to their current role.

The provision of adequate training to pharmacists was viewed as an important facilitator to the provision of drug misuse services whilst the lack of training and understanding of the area was seen as a potential barrier.

Service users tended to view pharmacists a 'dispensers of medication' rather than potential experts in the field of drug misuse. They described strong mixed experiences of pharmacy services. Pharmacist prescribing was generally welcomed as a way of increasing the availability of treatment with the reassurance that such pharmacists were adequately trained.

Conclusions

The project has provided an assessment of the extent and nature of drug misuse services provided by pharmacists in south west England. It is clear that pharmacists are contributing much to the provision of community-based drug misuse services, however they could be better supported and more integrated. Negative attitudes were still apparent and service users shared mixed views of pharmacists.

INDEX OF CONTENTS

INDEX OF TABLES

INDEX OF FIGURES

Chapter One

INTRODUCTION

CONTENTS

1.1. THE ROLE OF THE PHARMACIST IN THE MANAGEMENT OF DRUG MISUSE

The importance of the community pharmacist in the delivery of care to drug users has been highlighted in the current clinical guidelines for the treatment of drug dependence (Department of Health, 1999) and in the Working Party on Pharmaceutical Services to Drug Misusers (RPSGB, 1998) as well as in other key documents including Advisory Council on the Misuse of Drugs (1988), Polkinghorne (1996) and Nakajima and Steinbach (1997).

Community pharmacists dispense methadone and other drugs on prescription to people dependent on opioids and if required by the prescriber, may supervise consumption of these drugs. Attending the pharmacy on a regular basis means that clients have regular access to a healthcare professional who can provide support and advice. As the pharmacist will often see the client more than the prescriber, a suitably trained and motivated pharmacist is in an excellent position to provide feedback on an individual's progress and may be able to provide brief interventions to aid a client through their treatment.

The aim of this thesis is to explore the extent of community pharmacy involvement (in the South West of England) in the care of people who misuse drugs with a view as to how this involvement could be extended, therefore this introduction will examine the extent of illicit drug misuse in England, and the strategies employed to manage the

harm associated with problematic drug use, with particular regard to the role of the pharmacist.

1.2. ILLICIT DRUG USE

1.2.1. Prevalence of Illicit Drug Use in England and Wales

The use of illicit drugs in England and Wales appears to be an increasing problem; however estimating the extent of the problem is difficult because of the illegal nature of illicit drug use. The British Crime Survey (BCS) is a self-completed survey carried out by the Home Office which asks respondents about their experiences of crime. Since 1996 it has also contained a comparable self-completion section on illicit drug use. In 2003/2004, 24,442 people respondent to this section with a further 2332 young people aged 16-24 who were also interviewed as part of the BCS.

The survey reports that cannabis is the most frequently used illicit drug in England and Wales. There was a significant increase in Class A drug use since 1998, mainly due to an increase in the use of cocaine and ecstacy, and an increase in the number of people aged 25-59 who take Class A drugs. It estimates that of all 16-59 year olds, 35.6% had (ever) taken an illicit drug and 12.3% had taken one or more illicit drugs within the last year. By extrapolating the data to the whole population, it was estimated that 500,000 people had used one or more 'Class A' drugs in the month before responding to the survey with 28,000 of all Class A users reporting using heroin in the last month.

The BCS has some limitations in its ability to reliably report rates of drug use.

As a household survey, the BCS does not cover some small groups, potentially important given that they may have relatively high rates of drug use, for example, the homeless, and those living in certain institutions such as prisons or student halls of residence. Nor, in practice, will any household survey necessarily reach those problematic drug users whose lives are so busy or chaotic that they are hardly ever at home.

Extrapolation of the results to the entire population is difficult, as a subsequent analysis of the BCS suggested that there was an inverse relationship between household income level and response rate with lower income households being less likely to respond. Extrapolation may therefore dilute the potential influence of lower income households on the prevalence of illicit drug use. (Elliot, 1997)

The National Drug Treatment Monitoring System (NDTMS) provides information on the numbers of people in treatment, and the percentage of these who were retained in treatment in a given month. In 2005-2006 there were 181,390 users in contact with treatment services in England compared with 85,000 in 1988-89.

By definition, the NDTMS data gives information about the number of individuals in treatment at a point in time. It does not therefore give information about those people using drugs but not receiving treatment. However, taken together, the results of the British Crime Survey and the statistics provided by the NDTMS suggest that the

prevalence of illicit drug misuse is increasing with a rise in the number of people receiving treatment for their problematic drug use.

1.2.2. Illicit Opioid Use

The term opioid refers to a substance that mimics the effects of 'natural' opioids in the brain. Most of the commonly misused opioids are derived from the opium poppy *Papaver somniferum*. Morphine and diamorphine (heroin) are examples of such substances. Pharmacologically, morphine and diamorphine are agonists at the μ-opioid receptor and are used medicinally for their potent analgesic properties. Other effects of these drugs include euphoria and a feeling of relaxation.

1.2.3. Consequences of Heroin Misuse

1.2.3.1. Consequences for the Individual

Regular use of heroin can lead to tolerance of its euphoric effects with increasing doses needed to get the same effect. Heroin is addictive and may cause physical dependence if used regularly. Withdrawal after regular use can produce unpleasant flu like symptoms and may include aches, tremor, sweating and chills and muscular spasms. These fade after 7- 10 days but feelings of weakness and feeling ill may last longer. Whilst many people do successfully give up long term heroin use, coming off and staying off heroin can be very difficult.

Fatal overdoses can happen, especially when users take their initial dose after a break during which tolerance has faded, or when opiate use is combined with use of other

depressant drugs such as an alcohol, tranquillisers or other opiates (Darke and Zador, 1996) as regular heroin users may use other opiates or depressant drugs when they cannot get hold of heroin.

These consequences are not, however, inevitable, some individuals use heroin in an occasional and controlled manner, and in this way limit the harm associated with chaotic use. (Warburton *et al,* 2005)

It is often difficult to know exactly what is being taken because the purity of street heroin varies and it is often mixed with adulterants, however, street heroin purity in the United Kingdom has been estimated at approximately 50%. (source: IDMU.co.uk)

Injecting increases the risk of overdose and also puts users at risk of a range of infections including hepatitis B and C, and HIV if injecting equipment is shared. The physical effects of long term heroin use may include chronic constipation, irregular periods for women and possibly pneumonia and decreased resistance to infection. This can be made worse by poor nutrition, self neglect and bad housing. Regular injectors may suffer more health problems including damaged veins, heart and lung disorders.

1.2.3.2. Consequences for Society

Much has been made of the link between drug use and acquisitive crime. Actual rates are hard to ascertain, but results from the National Treatment Outcomes Research Study (NTORS) suggest that once individuals are in treatment, rates of acquisitive

crime drop. Gossop *et al* (1999) report that their cohort of 753 patients reported more than 17,000 offences in the 90-day period before the start of the study, with 10% committing 76% of the reported crimes. The majority of the crime committed was in the form of shoplifting. In a comparable 90-day period, one year after commencing treatment 5632 crimes were committed representing a reduction of 67% from the number reported at intake, with the majority of these crimes being carried out by just 10% of the sample.

The results of the National Treatment Outcomes Research Study are discussed in more detail in section 2.4.2 on page 29.

It is clear, then that the consequences of drug misuse reach beyond that of the individual and that where the treatment of individuals with problem drug use occurs, there is a benefit to society from the reduction in crime associated with drug use.

Whilst it is acknowledged that treatment of all problematic drug use will result in benefit to the individual and society as a whole, this study concentrates on the treatment of individuals who have become dependent on opioids.

1.3. DRUG TREATMENT

1.3.1. Structure of Treatment Services in England

In 2001, in response to an increase in the prevalence of drug misuse in England, and a lack of a central co-ordinated approach to treatment, the Government created the National Treatment Agency (NTA), which is a special health authority, established to improve the availability, capacity and effectiveness of treatment for drug misuse in England.

The central aims of the NTA are to double the number of people in effective, well-managed treatment from 85,000 in 1998 to 170,000 in 2008 and to increase the proportion of people who successfully complete or, if appropriate, continue treatment. (Home Office, 2002)

At a local level, services to drug misusers are co-ordinated and purchased by Drug Action Teams (DAT). DATs are local consortiums that bring together representatives of some the local agencies involved in tackling the misuse of drugs, including primary care trusts, local authority, police and probation services. There are 149 DATs in England covering all local authorities. (source: www.nta.nhs.uk)

The NTA is responsible for monitoring the effectiveness of the DATs, for example, all DATs should be able to provide drug misusers with access to advice and information,

needle exchanges, counselling, community based prescribing, inpatient detoxification and residential rehabilitation.

This system of local agencies providing a local response to a central target should result in resources being targeted to the needs of the community which the DAT serves. However, as DATs are made up of a variety of local agencies (criminal justice and medical) it could be argued that the priorities of tackling drug misuse in the local area will vary depending on the over-riding structure of the DAT. Thus if a DAT is primarily made up of representatives with a medical background then the focus may be on treatment. If however, as is sometimes the case, a DAT has mainly criminal justice focus then it may concentrate more on crime and crime reduction initiatives rather than treatment.

1.3.2. Primary Care Services for Drug Misusers

The majority of services for drug users are based in the primary care sector, as has been advocated by the National Treatment Agency in the document 'Models of Care for Substance Misuse Treatment' (Department of Health, 2002) and in the current Clinical Guidelines for the Management of Drug Dependence (Department of Health, 1999). One of the key principles of this document is that "Medical practitioners should not prescribe in isolation, but should seek to liaise with other professionals who will be able to help with factors contributing to an individual's drug misuse. A multidisciplinary approach to treatment is therefore essential."

Drug users seeking treatment may receive assistance from their GP who may undertake to prescribe substitute medication alone, or in conjunction with a 'shared care' agreement. Support and the development of a treatment plan may be provided by a 'liaison worker' who will see the client on a regular basis. Alternatively, the GP may refer a drug user seeking treatment to a secondary care 'specialist' service which is overseen by a consultant. The type and availability of drug treatment is monitored by the NTA, and varies throughout the country, with a wide variation in the waiting times for treatment. For example, the waiting time for a 'specialist' clinic in Bristol was 1.9 weeks in September 2005 or 3.0 weeks for a GP-led service whilst in Torbay, the wait for a 'specialist' clinic was 15.8 weeks with no GP-led services available. (NTA, 2005)

1.3.3. Drug Treatment of Opioid Dependence

In the United Kingdom, substitution therapy with methadone is the most common form of treatment for opioid dependence. The aim of methadone treatment is to improve the quality of life of opioid dependent people and to reduce the potential harm from using illicit drugs. (Ford *et al,* 2005) The evidence for methadone and other treatments for opioid dependence are reviewed in sections 2.3, 2.4 and 2.5 on pages 26-36.

1.3.4. Prescriptions for the Treatment of Opioid Dependence

Analysis of Prescribing Analysis and Cost (PACT) data shows that the number of prescriptions for methadone issued by General Practitioners in England has increased by a factor of over 25% between 2002 and 2004 (770,453 in 2002 and 1,047,118 in 2004) although it is acknowledged that a small proportion of these prescriptions may have been for conditions other than opiate dependence. The number of prescriptions issued for buprenorphine has increased by over 50% (207,915 in 2002 and 432,304 in 2004) however it is similarly acknowledged that a proportion of this total is the prescription of low dose buprenorphine for pain relief.

As increasing number of prescriptions for methadone and buprenorphine are being issued for dispensing in a community pharmacy, it follows that more community pharmacists are becoming involved in the care of drug misusers. In 1998, a Working Party on Pharmaceutical Services for Drug Misusers (RPSGB, 1998) made 59 recommendations on improving community pharmaceutical services to drug misusers. The Party recommended that the way forward was to ensure that better use was made of the existing network of community pharmacies.

However, at the time that this work was started, there was little acknowledgement by the NTA of the importance of the role of the pharmacist in the care of drug users in their key 'Models of Care' document. Although the NTA frequently refers to the dispensing of methadone, supervision of consumption and the provision of needle

exchange it does not pay any specific attention to pharmaceutical care service models or development.

It is suggested that as the community pharmacist will often see the client more frequently that the prescriber, they are vital to ensuring that the National Treatment Agency's 10 year drug strategy is implemented. Other models of providing treatment, for example, nurse dispensing within specialist drugs services do not have the capacity to meet the needs of the entire population. With a network of primary care prescriptions for methadone being written by GP's and dispensed by community pharmacists, with additional counselling and feedback provided by the pharmacists to support the care given by the GP and drugs worker, the secondary care 'Specialist' teams can focus on more complex needs cases.

1.3.5. Clinical Governance

Clinical governance provides a framework through which the quality of service provision and standards of care continuously improve. The clinical governance guidelines for community pharmacy clearly see community pharmacy services as part of the NHS and community pharmacists as being accountable for the publicly funded services that they provide (Department of Health, 2001). An important part of clinical governance is reviewing current standards of service provision and identifying opportunities for service development. This may include quantifying the extent of service provision with the aim of identifying if levels of service provision are sufficient to meet need, and improving quality of care e.g. implementing risk management

strategies, ensuring staff are appropriately trained. The identification and sharing of good practice is a fundamental principle of clinical governance. It is therefore somewhat surprising that the Models of Care document produced by the NTA lacks information on the standard of care provided by pharmacists to drug misusers.

1.4. THE EXTENT OF PHARMACY INVOLVEMENT IN THE CARE OF DRUG MISUSERS

The extent to which pharmaceutical services in England are provided to drug misusers was last quantified in 1995 (Sheridan et al, 1996). Since this time there have been many developments in drug misuse treatment provision with the establishment of the NTA, so a consequent increase in pharmaceutical involvement is predicted e.g. supervised consumption, although the extent of this has not been quantified. In a recently published study from Scotland this increase has been quantified. Matheson et al (2002) found the number people receiving methadone through pharmacies had increased by 259% between 1995 and 2000. The mean number of methadone clients per pharmacy had increased from 7.3 in 1995 to 13.2 in 2000 with 65% of all methadone clients under pharmacist supervision of consumption. The proportion of pharmacies that provide a supervised consumption service had increased from 37% to 83%. Such large increases suggest that the 1995 data for England will now be out of date.

Detailed review of these studies can be found in section 2.7.2 on pages 42-54.

1.4.1. Quality of Pharmacy Services

As described briefly above, the majority of published work has concentrated on quantitative (numerical) measures of pharmacy services to drug misusers. Little work has been carried out on the quality of these services and how they are perceived by

service users. Qualitative studies in this area are reviewed in section 2.8 and 2.9 on pages 55-66.

1.4.2. The Expanding Role of the Pharmacist

It is recognized that pharmacy services in areas other than drug misuse are expanding, for example cholesterol and blood pressure testing and Medication Use Reviews are being carried out by community pharmacists, with some setting up structured services to enable weight loss and smoking cessation. Recent changes in legislation now enable suitably qualified pharmacists to act as supplementary prescribers, and as pharmacists are often the healthcare professional in most regular contact with people who misuse drugs, there may well be the potential to expand and develop the range of services provided to drug misusers. However, to enable service development the views of the providers and users should be further researched.

1.5. THE CURRENT STUDY

1.5.1. Motivation

The motivation for this study was three-fold. Firstly, as the last estimation of the extent of pharmacy services in England was over a decade ago, this study sought to update the literature of the extent and nature of services provided by community pharmacists to drug misusers. Secondly, at the projects conception in 2002, it was recognised that the NTA's 'Models of Care' document lacked specific description, detailing the expected quality of pharmacy services, and finally it was recognized that in order for pharmacy services to drug misusers to be expanded and developed, the views of service providers and services users on the current service and future expansion should be considered with the addition of qualitative work to the literature.

1.5.2. Location of the study

The study was based in the South West of England with the whole population of community pharmacies in the three Strategic Health Authority areas of Avon, Gloucestershire and Wiltshire; Dorset and Somerset and the South West Peninsula included in the research.

The South West is made up of large urban, small urban, suburban, small town and rural areas with a diverse urban population and is home to nearly 5 million people from a total population of 49 million in England. There are 903 community pharmacies in the South West which is 8.6% of the total number of pharmacies in England. The most

recent statistics from the National Treatment Agency indicate that there are nearly 17,000 drug users in treatment in the South West, which is approximately 10% of the total number of drug misusers in treatment in England (160,450 in 2004/2005). English national drug policy and funding systems apply, as do national pharmaceutical practice guidance so whilst extrapolation of the data to the whole of England will not be attempted, the figures quoted above suggest that approximately 10% of the total population of community pharmacies have potential contact with approximately 10% of the total number of drug misusers in treatment.

1.5.3. The Literature Review

The following chapter contains a review of the literature on pharmacy based drug misuse services and on previous surveys that have attempted to quantify these services. At the end of the literature review a series of research questions are generated which form the objectives for the research conducted in this thesis.

Chapter Two

LITERATURE REVIEW

CONTENTS

2.1. SEARCH STRATEGY

The bibliographic database EMBASE was used to assist this literature review. EMBASE includes journals with a bioscience and pharmacy background and includes journals with a psychiatric focus. The database was searched in a systematic manner, and the searches described below were carried out bi-monthly to ensure that any new articles were picked up.

The results of the final search (conducted in May 2006) are summarised in the tables below.

Keyword	Number of Articles
Drug Abuse	28708
Drug Misuse	2213
Drug Dependence/ addiction	20883
Substance Abuse	14686
Heroin Dependence/ addiction	2506
Methadone	11234
Methadone Treatment	1735
Harm Reduction	319
Pharmacist	15802
Supervised Consumption	10
Attitude	20914
Users' views	66
Drug User	750
Drug Misuser	17
NTORS	21
Pharmaceutical Care	4566

Table 1: ***Results of keyword search from Embase 1980-2006 (week 23)***

Next, the keywords above were combined in a systematic manner to obtain articles most relevant to the review. These combined searches are summarized in the following table.

Combination of Keywords Used	Number of Articles
Drug Abuse AND Pharmacist	150
Drug Misuse AND Pharmacist	140
Drug Dependence AND Pharmacist	134
Substance Abuse AND Pharmacist	42
Heroin Dependence AND Pharmacist	22
Methadone AND Pharmacist	170
Methadone Treatment AND Pharmacist	28
Harm Reduction AND Pharmacist	3
Drug Abuse AND Pharmacist AND Attitude	3
Heroin Dependence AND Pharmacist AND Attitude	1
Methadone AND Pharmacist AND Attitude	3
Harm Reduction AND Pharmacist AND Attitude	0
Methadone AND Users Views	4
Supervised Consumption OR Pharmacist AND Users Views	1
Methadone AND Pharmaceutical Care	6

Table 2: ***Results of combination search from Embase 1980-2006 (Week 23)***

Following the keyword and combination search, a search of names of known important authors in the subject was performed. The results of the search are summarised below.

Authors Name	Number of Articles
Sheridan J	81
Matheson C	34
Neale J	21
Strang J	265

Table 3: ***Results of author search from Embase 1980-2006 (Week 23)***

The results of the combined and author searches were then studied on a citation-by-citation basis, and from this the reference list was obtained. Criteria for exclusion from the primary reference list were as follows:

1. Citation was not based on human studies.
2. Citation did not have drug misuse as its **focus.**
3. Drug misuse was the focus, but the drugs mentioned were **not** illicit or Over the Counter (OTC) medications.

The primary reference list was added to Reference Manager, a computer database program. At this stage those references that were deemed to be most relevant were read in detail.

2.2. DRUG TREATMENT OF OPIOID DEPENDENCE

2.2.1. Drugs licensed in the United Kingdom

The British National Formulary (BNF-51) lists four drugs that are licensed to treat opioid dependence in the United Kingdom. These drugs can be classified as follows.

2.2.1.1. Substitute Medication

This term refers to the use of these drugs as a substitute for the illicit drug on which the individual is dependent. The aim is, therefore, to prevent the onset of withdrawal symptoms. These drugs are also opioids and as such have the potential to cause dependence. The two drugs licensed for substitution therapy are methadone and high dose buprenorphine.

2.2.1.2. Adjunctive Medication

This term refers to those drugs which are used as an add on to substitute treatment to alleviate symptoms of withdrawal in those whose opioid use is under control and who are undergoing detoxification (lofexidine), or to block the actions of opioids and precipitate withdrawal in opioid dependent individuals (naltrexone). The latter drug is often given to recovered addicts as an aid to prevent relapse.

2.2.2. Drugs not licensed in the United Kingdom

Diamorphine and lambda-alpha-acetylmethadol (LAAM) are both substitute medications which are not licensed for the treatment of opioid dependence in the UK,

however, diamorphine (in the injectable form) is used by some treatment centres in the UK.

There now follows a more detailed review of substitute medication.

2.3. METHADONE

Dole and Nyswander pioneered methadone maintenance therapy (MMT) in 1965. Since then a number of articles have reviewed MMT based on a number of outcomes. Such review articles are Farrell *et al* (1994), Ward *et al* (1999) and Marsch (1998).

The effectiveness of MMT has been judged on the following criteria,

1. Reduction in illicit opiate use
2. Reduction in crime
3. Reduction in HIV risk behaviours

These criteria will now be discussed in more depth.

2.3.1. Reduction in Opiate Use

An early trial (Dole *et al,* 1969) comparing MMT to a no treatment control suggested that subjects in the control group were 92 times more likely to be using heroin daily than those in the methadone group. More recently, Hutchinson *et al* (2000) reported that in a one-year cohort study of a group of 204 opiate injectors, 29% of the initial group remained on methadone for the 12-month period, and in that group, self-reported opiate injecting reduced from 78% to 2%. Lewis and Bellis (2001) found that 56% of clients being treated in a general practice setting still had some form of illicit drug use compared with 100% at the start of treatment (mean length of treatment was 15 months).

In a meta-analysis of 11 studies investigating the effect of MMT on reducing opiate use, Marsch (1998) found that all 11 studies reported that MMT significantly reduced illicit drug use (r=0.35), although the margins by which this occurred varied greatly, and were dependent on sample size. Taking the results of this statistical analysis into account, Marsch derived that, based on a sample size of 200, approximately 135 (67%) may be expected to reduce their illicit drug use.

2.3.2. Reduction in Crime

Dole *et al* (1969) found that subjects in the control (no treatment) group were 53 times more likely to have been reincarcerated than those in the MMT group. Hutchinson *et al* (ibid) reported that in those drug users who remained on the program for 12 months, mean daily drug spend reduced from £50 to £4, and the mean number of monthly acquisitive crimes reduced from 13 to three.

A meta-analysis study that looked at the ability of MMT to reduce criminal behaviour (Marsch, 1998) revealed that overall; MMT had a small to moderate effect (r=0.25). However, the 24 studies to which the meta-analysis was applied differed in the type of criminal behaviour studied. Those studies looking at the reduction in drug related criminal behaviour revealed a significant large effect size (r=0.70), but a small effect (r=0.17) on non-drug related crimes. Marsch concluded that MMT treatment effects are restricted to reducing drug related crime, and that even whilst in treatment, some opiate-dependent individuals have the inclination to engage in crime that is not related

to their drug use. Based on a sample of 200 people undergoing MMT, Marsch deduced that 170 (85%) would be expected to reduce their drug related criminal behaviour.

2.3.3. Reduction in HIV Risk Behaviours

Marsch's meta-analysis of 8 studies also looked at the ability of MMT to reduce HIV risk behaviours, and revealed a small overall effect size of 0.22. However, when compared to the reduction in risky behaviour that would have occurred by chance (r=0.5), based on a sample of 200, it was calculated that 122 (61%) may be expected to reduce HIV risk behaviours whilst on MMT.

2.4. EFFECTIVENESS OF METHADONE

2.4.1. US Trials

There have been a number of large scale US-based treatment outcome studies including the Drug Abuse Reporting Program (DARP), the Treatment Outcome Prospective Study (TOPS) and the Drug Abuse Treatment Outcome Study (DATOS). These studies have shown that patients who enter methadone programs can make significant reductions in their use of heroin and other illicit drugs (Hubbard et al. 1997;Simpson & Sells 1983)

There are differences between drug treatment programs in the US and those in England and Wales. There are cross national differences in the patterns of drug misuse, the types of treatment services provided and socio-economic factors. It is unclear, therefore how results from studies in the US can be generalised to England. For this reason the National Treatment Outcome Research Study (NTORS) was commissioned by the Department of Health, and it is this study which is focussed upon in this review.

2.4.2. National Treatment Outcome Research Study (NTORS)

NTORS was a large-scale longitudinal study of more than 1000 people in 31 methadone programmes who entered these services in England during 1995. The 31 treatment programmes were divided according to the goals of the service, either methadone maintenance or methadone detoxification. The study was designed to test whether methadone treatment was an effective means of reducing levels of illicit drug

use and other problem behaviours such as intravenous injecting and acquisitive crime as has been demonstrated in previous studies in the USA.

Gossop *et al* (1998) reported that at intake, NTORS clients reported extensive problems related to long-term drug misuse. As well as heroin, many clients reported the use of other drugs such as benzodiazepines and non-prescribed methadone. Many clients also reported regular use of alcohol.

2.4.2.1. NTORS Outcomes - Drug and Alcohol Use

At the one-year follow up stage, Gossop *et al* (1998) reported that clients had indeed reduced their consumption of heroin, stating that regular use (weekly or more frequent) reduced from 81% at intake to 49% after one year. Regular use of benzodiazepines and non-prescribed methadone was reported by approximately one-third of clients at the start of treatment and was reduced to under 20% after one year of methadone treatment.

At the two year follow up, there were further significant reductions in the use of heroin and other drugs, with no increases in the average frequency of use reported between the two follow-ups. (Gossop *et al*, 2002).

2.4.2.2. NTORS Outcomes - Injecting Behaviour

NTORS showed a reduction in the proportion of clients injecting drugs. This reduced from nearly two-thirds at the start of treatment, dropping to less than one half after one

year. There was also a reported reduction in the rates of sharing needles, from 13% to 5% after one year.

2.4.2.3. NTORS Outcomes - Reduction in crime

Clients reported a high level of crime at the start of treatment. The authors of the study estimated that the cost of this drug related crime for the NTORS cohort totalled £12 million in the year preceding treatment. After one year the levels of reported criminal behaviour were greatly reduced, with the proportion of methadone clients committing acquisitive offences reduced by half. In particular, shoplifting and burglary offences were reduced by 70%. These reductions in acquisitive crime were associated with reductions in the frequency of heroin use. After two years, there was a further (slight) reduction in acquisitive crime.

2.4.2.4. Interpreting the results of NTORS

NTORS concluded that clients treated in methadone programs showed improvements in their drug use, as well as a reduction in intravenous use of drugs and a reduction in acquisitive crime. These results are consistent with other US based studies. A welcome finding from the NTORS data is that reduction in drug use occurred in the early stages of treatment and appeared to be maintained after one and two year follow up.

However, any large scale multi-site study such as NTORS has shortcomings. The NTORS cohort was recruited by the treatment agency in which they started treatment. Fifty-four such agencies participated in the study and staff from those agencies were

responsible for conducting interviews at the intake of clients, at one month and six month follow up stages. There was likely to have been considerable differences in the way the interviews were conducted, and as treatment agency staff carried out the interviews, the clients *may* have felt under pressure to give positive responses to questions in order that their treatment continued. Although participation in the study and subsequent responses to questions in no way jeopardised continuing therapy, the effect on the participant of being interviewed by a member of the agency staff cannot be ignored.

NTORS compared four treatment modalities: (i) inpatient units, (ii) residential programmes, (iii) outpatient/community based methadone reduction programmes and (iv) outpatient methadone maintenance programs. Patients were not randomised to the treatment options due to the way in which the study participants were recruited. Because of this there were differences in client characteristics between the four groups, for example clients in the inpatient and methadone maintenance programs had used heroin for longer than those in the methadone reduction services. Clients in the residential agencies tended to drink more heavily than those in other treatment modalities and tended to have more complex health problems than those in the community setting.

This makes overall comparison between the different treatment modalities difficult, and whilst clients treated in each of the four modalities showed improvement at one year it

would not be possible to conclude that all clients would have improved after treatment in any of the four modalities.

There were no 'control' clients in any of the four treatment groups, so no conclusions could be made regarding the effectiveness of treatment intervention of any kind versus no intervention.

There was no mention in the NTORS study as to how the community programmes were organised. We do not know if all the clients' treatment in the community modalities were expected to attend the clinic every day for a dose of methadone, or if some of these programmes involved community pharmacies. We also do not know if the clients in the community modalities were given methadone to take away of if they were required to consume their dose in front of the drugs worker or pharmacist.

After one year, the NTORS study stated that there 'was considerable inter-agency variation in drug use outcomes with clients from the best performing agencies showing far greater improvement than those at the worst performing services.' There is, however, no discussion about the characteristics of a service that yielded good results. This information would have been useful to inform treatment programmes how to best structure their approach to treatment.

2.5. OTHER OPIOIDS USED IN THE MANAGEMENT OF DEPENDENCE

As the weight of the evidence is behind methadone, it has remained the mainstay of treatment of opioid dependence in the UK; however, other alternative agents have been used. These will be briefly discussed below.

2.5.1. Buprenorphine

Buprenorphine is a mixed opioid receptor agonist/ antagonist. As a partial antagonist, it reduces the risk of overdose, and its long half-life means that every–other day dosing is possible. This is less time-consuming for the patient, and helps to reduce treatment costs. Johnson *et al* (2000) reported that the percentage of patients with 12 or more consecutive opiate-negative urine samples was equivalent when comparing patients treated with buprenorphine and those treated with an adequate dose of methadone.

2.5.2. Injectable-Diamorphine Maintenance

Injectable-diamorphine maintenance treatment has been proposed as a way of attracting heroin users into treatment through the provision of their preferred drug, heroin (Ward *et al*, 1999). Some drug users already on a MMT program would rather use injectable-heroin as a way of stabilising their drug use, (P.Anson, personal communication). Reasons for this include the perceived difficultly in breaking the 'needle habit' associated with long-term intravenous drug use. (McBride, 2001)

Perenger *et al*, 1998 reported on a randomised trial of a heroin maintenance program for addicts who had failed in at least two previous drug treatments. Eligible patients were randomised into two groups. The first group received maintenance doses of heroin (usually three times a day) at doses established by a psychiatrist. The control group were enrolled onto other conventional drug treatment programs, with the option of transferring to the heroin maintenance program after six months. Both groups were followed up after six months. Those in the 'heroin' group reported less use of 'street heroin' that the control group, and the mental health status of those in the heroin group improved significantly more than the control group. The authors suggested that a heroin maintenance program may be a feasible alternative for severely addicted opiate users, although they did note that after the six month trial only 38% of the control group decided to change to heroin maintenance.

This study was on a very small scale (57 participants) and the authors concede that this threatens the reliability of the findings. The outcomes measured in this trial were all self-reported which can introduce bias.

Injectable-heroin maintenance is unlikely to gain much ground on traditional forms of treatment for drug addicts (i.e. methadone). It is likely to be more costly than MMT, as in the trial reported above, clients went to the clinic up to three times a day, and were observed for thirty minutes before being allowed to leave. In contrast methadone is usually given as a single daily dose, as it has a longer half-life than heroin.

Luty (2003) argues that prescribing injectable heroin to addicts is 'unproven, unpopular and unbelievable.'

It may, however, be an alternative for those addicts who are resistant to conventional treatment.

2.5.3. Lambda-alpha-acetylmethadol (LAAM)

LAAM is a longer acting opioid agonist than methadone and has the same advantages of buprenorphine in terms of alternate day dosing and cost effectiveness. Johnson *et al* (ibid) found LAAM was equally effective at reducing illicit opiate use, measured by urine testing. However, continued participation in the trial was significantly more frequent in those patients receiving adequate doses of methadone than those patients being treated with LAAM.

The EU licence for LAAM was withdrawn in April 2001 following evidence that the drug prolongs the QTc interval.

2.6. CHARACTERISTICS OF TREATMENT PROGRAMMES

2.6.1. Maintenance or Abstinence?

Dole and Nyswander's original model of methadone maintenance treatment called for high doses of methadone coupled with a long duration of treatment and intensive rehabilitation therapy, however, the goal of many programmes has moved from maintenance towards abstinence from all opioid drugs (Ward *et al*, 1999).

The decision to detoxify the client is based on a number of factors, such as evidence of positive behaviour change and low levels of 'life stress'. However, it should only be considered after at least one year in maintenance treatment. (Law and Dean, 1997).

Ward *et al* (1999) suggest that the effectiveness of MMT is reduced when there is a reduction in the dose of methadone, and when clients are under pressure to become abstinent.

Farrell *et al* suggest that methadone maintenance programmes vary substantially in their effectiveness. In a study of six methadone clinics, illicit drug use was reduced to 10% in the most effective clinic, to just 56% in the least effective. Effective clinics were generally prescribing higher doses of methadone and had a treatment goal of maintenance rather than abstinence.

2.6.2. Dosage of Prescribed Methadone

Johnson *et al* (2000) reported that high doses of methadone (60-100mg) were significantly more effective at reducing illicit drug use, measured by urine analysis and self-reporting, than the control group (low dose, 20mg methadone). Retention in the trial was significantly greater for the high dose methadone group (105 ± 4 days) than in the low dose group (70 ± 4 days).

Law and Dean (ibid) suggest that program factors that include a low average level of methadone dosage, shorter duration of methadone maintenance and low levels of ancillary services such as counselling and employment help are associated with a poor prognosis for the client. They also argue that some clients may never be suitable for detoxification from opiates, but should continue to receive treatment on the basis of a harm reduction stand.

Newman (1996) argues that addiction to opiates is a chronic disease, and should be managed thus. He argues that 'methadone is simply a medication and should be used like one' He states that most diseases we treat defy cure (e.g. schizophrenia) but even so, long term treatment are still provided. Newman also states that there are too many rules, regulations and negative attitudes imposed on those clients in MMT and that this 'degrades' the process of methadone treatment. However, Newman does not take into account the characteristics of drug users that sometimes prompt 'rules and regulations' regarding methadone treatment. Nevertheless, it does prompt an interesting debate as to whether opiate dependent users should be 'detoxed' at all.

2.6.3. General Practice or Drug Clinic?

Lewis and Bellis (2001) compared the outcomes of MMT patients treated in general practice or a drug clinic over a two-year period. They found that patients in general practice were more likely to be in treatment at the end of the study than those treated by the clinic (71% and 27% respectively) and patients in general practice were more likely to be tested for and immunised against hepatitis B.

The general practitioners (GPs) in this study worked closely with community psychiatric nurses (CPNs) and were all interested in drug dependence, and were supported by the local health authority to provide treatment to drug users. This is an example of a 'shared care' agreement which suggests that general practice is as good as drug clinics at keeping drug users in MMT. However, differences in the client profile may have influenced these results as drug clinics are more likely to see the more difficult to treat client, such as a chaotic or poly drug user or with co-morbid psychiatric disorders.

The authors do however point out that not all GPs wish to treat drug users and some do not consider primary care as an appropriate setting. This suggests that in other areas, where the existence of shared care guidelines is limited, the drug clinic may be better at keeping clients in treatment.

In the UK, the Royal College of General Practitioners has recently updated it's guidance on the use of methadone for the management of drug dependence in the primary care setting (Ford *et al*, 2005).

2.7. PHARMACEUTICAL CARE OF DRUG MISUSERS

2.7.1. Definition of Pharmaceutical Care

The term 'Pharmaceutical Care' was defined by Hepler and Strand (1990) as the 'responsible provision of drug therapy for the purpose of achieving definite outcomes that improve a patient's quality of life. These outcomes are (i) cure of a disease; (ii) elimination or reduction of a patient's symptomatology; (iii) arresting or slowing of a disease process; or (iv) preventing a disease or symptomatology.'

Challenges to this original definition have been made; Barber (2001) argues that Hepler and Strand's original definition is focussed on the patient's disease rather than the patient. He suggests that this definition of pharmaceutical care is no different to that of medicines management, since the outcomes are all related to the provision of drug therapy.

2.7.1.1. Pharmaceutical Care of Drug Misusers

Pharmacists dispense methadone and other opioid substitutes to opioid dependent drug misusers and if requested by the prescriber, may supervise the consumption of the daily dose. These services fall within the criteria of Hepler and Strand's definition of pharmaceutical care.

However, providing clean injecting equipment and advice to drug users are activities that are outside the original definition, as they are not related to the provision of drug therapy.

2.7.2. Survey of Pharmacists: Provision of Pharmaceutical Services to Drug Users

There have been a number of studies that have attempted to quantify the level of community pharmacy involvement in the care of drug misusers in the UK. These are now reviewed in detail below.

2.7.2.1. England and Wales – National surveys

The first major study of community pharmacists' involvement in the provision of pharmaceutical services to drug users was carried out by Glanz *et al* (1989). The study set out to determine the current and potential roles of community pharmacists in the prevention of AIDS among injecting drug users (IDU). Glanz surveyed a one in four random sample of registered pharmacies in England and Wales and a response rate of 79% was achieved after three mailings. As this fell short of the target sample of 1 in 4 pharmacies, Glanz choose to correct for non-response by applying weighting to his results. The assumption was therefore made that non-responding pharmacies would respond in a similar manner to responding pharmacies.

The study found that 23% of pharmacies surveyed were dispensing controlled drugs to an estimated 7700 injecting drug users. 75% of pharmacies surveyed would be prepared to sell clean injecting equipment to known or suspected IDUs, and that 28%

of pharmacies surveyed were currently selling clean injecting equipment. This was then extrapolated to the whole population of pharmacies in England and Wales and Glanz suggested that some 7000 pharmacies could be outlets for injecting equipment whilst some 2700 already were.

Glanz also measured the pharmacists' attitude to some statements concerning the pharmacist's role in the prevention of AIDS. He found that those pharmacists who were already supplying injecting equipment to drug users and those who were willing to supply had a more positive attitude score that those who were not willing to supply. For example the proportions agreeing or strongly agreeing to the statement that drug misusers visiting the premises would have a damaging effect on business were 61% (current suppliers), 63% (willing suppliers) and 90% for those pharmacists who were not willing to supply.

A significant assumption was made in this study; this was that non-respondents would reply in a similar manner to those who chose to respond to the study. This assumption is flawed. One must consider **why** an individual may choose not to respond. As Glanz acknowledges in the appendix of the paper, analysis by mailing wave showed a tendency for response to be more negative in later response waves, with 76% of first mailing respondents prepared to sell clean injecting equipment compared to 64% of third mailing respondents. Perhaps those pharmacists who did not respond had no interest in the prevention of HIV or felt that the questions being asked were not relevant to them, and therefore did not respond. An understanding of the effect of 'non-

response bias is important, especially as the authors decided to extrapolate their findings to the whole population. Such extrapolation of the results of a 1 in 4 sample to the whole population of pharmacies presents some difficulties. The differing demographic profile of England and Wales means that there are likely to be areas of high involvement, such as in the London area where an average of 36% of pharmacies survey were selling injecting equipment, as well as areas of low involvement such as Wales where only 11% of pharmacies were selling injecting equipment. Bearing these differing levels of involvement in mind, it is therefore impossible to make assumptions about the whole of England and Wales based on this sample.

In 1996, Sheridan *et al* (1996) published the results from the second such survey of community pharmacists, eight years on from Glanz's original work. The questionnaire used was based on that of Glanz (1989), using the same one in four sample size. The response rate obtained was 74.8% after four mailings, slightly less than Glanz (79%) eight years previously. Sheridan, however, did not apply weightings in an attempt to correct for non-response.

Sheridan found that 50.1% of pharmacies were dispensing to an estimated 30,000 drug users, compared with 23.0% in 1988, and that 34.4% of pharmacies surveyed were currently selling injecting equipment to users compared with 28.0% in 1988. The number of pharmacies willing to sell injecting equipment remained unchanged (73.9% in 1995 and 74.0% in 1988).

Sheridan did not attempt to extrapolate these results to the entire population of community pharmacies, but at the same time did not acknowledge that comparison of these latest figures with those of Glanz (1988) should be treated with caution because of the data manipulation required due to the weightings applied to the 1988 data.

This caution was however acknowledged in a later paper, Sheridan *et al* (1997) where the attitude component of the questionnaire was reported. The attitude statements used in the 1995 survey were similar to that of the 1988 survey and a cautious comparison was made. Sheridan (1997) noted that there was very little shift in attitude in the eight years between the two surveys. More respondents in 1995 tended to agree that they needed training in areas around drug misuse, and that they had a positive role to play in the prevention of HIV and AIDS, however, slightly more pharmacists in 1995 agreed with the statement that drug misusers have a damaging effect on business. Sheridan does however acknowledge that it is uncertain to what extent these small shifts in attitude are due to the questionnaire differences. A direct comparison should only be made if the questionnaire remains the same.

The use of attitude data in this paper was limited, and there was no attempt to correlate attitude with service provision.

The extent of non-response bias in this survey was investigated by Sheridan and Strang (1998). In the original 1988 survey, Glanz followed up his initial mail shot with two further reminders sent out at weekly intervals. In the survey carried out eight years

later, Sheridan used an additional mail shot to further increase the response rate. As has already been discussed, the missed responses from those who chose not to respond to the questionnaire are of important consideration if the intention is to extrapolate the results of a sample to the entire population.

To examine the non-response bias in the 1995 postal survey of community pharmacists, Sheridan (1998) followed up non respondents with a short telephone interview. They found that significantly less of the 'telephone' group dispensed controlled drugs for the treatment of addiction when compared to the 'postal group' (60.8% and 49.9% respectively). Interestingly, significantly more of the telephone group were selling clean injecting equipment than those in the postal group. (51.2% and 34.5% respectively). The authors concluded that on the basis of the statistical difference between the postal responders and non-responders (telephone follow-up) it would have been misleading to extrapolate the results of the postal survey to the entire population of community pharmacies.

Sheridan and Barber (1998) also looked at the addition of a fourth mail shot as a means of increasing the response rate to the postal questionnaire used in the 1995 survey. They compared the results of mail shots 1-3 to the fourth and final mail shot. They found no statistical difference between the two groups either on demographics or service provision and concluded that the addition of this fourth mail shot had no effect on the overall results. They stated that the addition of this final mail shot only increased the overall response rate by 4.8% and that in this particular study did not particularly

improve the representativeness of the results, as a high response rate (70%) had already been achieved after three mail shots. However, in a study where a poor initial response has been obtained, further mail shots may be required in order to reach a reasonable response rate of 60-70%.

2.7.2.2. England and Wales – Local Surveys

The difficulty in extrapolating national survey results such as those from Glanz (1989) and Sheridan (1996) is highlighted by the following two studies.

McBride *et al* (2001) reported the results of a small scale survey of a population of community pharmacists in the Bro Taf health authority. This postal based questionnaire study achieved a response rate of 89% after an initial mail shot followed by telephone reminders and additional mailings to non-responders.

In this survey, 23% of respondents participated in a needle exchange scheme, with 55% of pharmacists willing to sell injecting equipment. 55% of respondents currently dispensed controlled drugs for the treatment of drug misusers, with 25% supervising methadone consumption in the pharmacy. A further 31% of respondents reported that they did not currently have any clients on supervised consumption.

The results of this survey were compared to a study carried out 10 years previously, (McBride *et al*, 1993). The authors recognise that the study carried out in 1990 and 1991 was different, both in areas covered and details of the questionnaire. However, a

comparison was made, and the authors reported that there has been little change in the level of pharmacy based service provision for drug users in the Bro Taf health authority area.

Luger *et al* (2000) published the results of a small scale study which looked at the involvement of community pharmacists in the supervision of methadone consumption in a pilot scheme in Camden, London. The aim of the study was to assess the feasibility and acceptability of providing a supervised consumption of methadone service from local community pharmacies. A number of social research methods were employed during the study, semi-structured questionnaires, focus groups, in-depth interviews and telephone interviews. This study has a number of flaws.

Firstly, clients with a history of alcohol and/ or chaotic drug use were excluded from the scheme. Later, the authors report that "While bad experiences, such as verbal abuse, theft or violence, were reported from non-supervised methadone clients or other illicit drug users, the supervised clients were generally considered as well selected, well informed as to regimes, well behaved, more stable than some other drug using clients." This observation is inevitable as the exclusion criteria of the study selected only those clients who were reasonably well adjusted.

MMT and supervised consumption are methods by which a drug users life can be made less chaotic and therefore one could argue that this study has selected against those clients for whom supervised consumption may have a positive benefit.

Secondly, it would appear that the researchers made an apparent attempt to triangulate the responses of the client and their respective drugs worker and pharmacist was made during the in-depth interview section, however there is no mention of this triangulation in the results.

Thirdly, the small scale of this study made it difficult to include any meaningful descriptive statistics, and none were attempted in this report. Instead, vague statements such as "On the whole....", "The majority of...." and "The great majority of....." were used to describe the data.

The 17 pharmacists who were recruited for this study were done so on the basis of their experience in dispensing for drug users, their geographical location and proving acceptable facilities for dispensing at their premises. The pharmacists were given a days training on many aspects of drug misuse, in order to fully equip them with the necessary skills to deal with drug using client. In spite of this training, 'a third' of pharmacists found it difficult to cope with methadone patients. The authors did not however question the suitability of the training, nor did they question the feasibility of such training should the scheme be adopted across the whole of the Trust area. It is uncertain what 'acceptable facilities' means, what it does not mean is a private area for consumption of methadone since this was later reported as being an issue for 60% of the clients in the study.

The conclusions drawn from these limited results were that supervised consumption of methadone was an effective use of resources and a viable method of substitute drug treatment for opiate users.

This paper reported on a very small study, and one which could not be analysed by anything but the most basic statistics. Any conclusions drawn from these results should be treated with caution.

2.7.2.3. Scottish Surveys

Matheson *et al* (1999) reported on a postal survey of the entire population of Scottish pharmacies. The survey was carried out in 1995, and contained demographic information as well as questions about provision of services to drug users and a significant section on attitude.

A response rate of 79.1% was achieved with two reminders. Questions around the provision of sterile injecting equipment revealed that only 8.8% of those pharmacists who replied provided a needle exchange service. 17% of those surveyed sold needles and syringes with a further 36.9% willing to do so but reporting that there was no demand.

Methadone was dispensed by 53.2% of respondents, and of these 35.4% supervised consumption, with the mean number of clients per pharmacy at 7.3.

Matheson used the results obtained form the survey to correlate service provision with attitude. The responses to twenty-seven statements on the theme of drug misuse, pharmacists attitudes towards drug misusers and service strategy were measured using a five point Likert scale from 'strongly agree' to 'strongly disagree'. Each response was assigned a value from –2 to 2. This allowed the researchers to compute a score for each respondent by adding the response to each statement (from –2 to +2). The higher the score, the more positive the attitude.

Those pharmacists with a high attitude score (15.7) were more likely to provide a needle exchange service. Those with a lower attitude score (3.1) tended not to provide such a service. Similarly, those pharmacists prepared to supervise consumption of methadone had a significantly higher attitude score than those who were not prepared to supervise consumption, (14.5 and –6.8 respectively). Those pharmacists who had received training on drug misuse had significantly higher attitude scores than those who had not had training (7.8 and 2.4 respectively). Similarly those pharmacists wanting further training had significantly higher attitude scores that those not wanting training (6.9 and –4.0 respectively).

What is not possible to deduce from the results of this attitude measure is whether the high attitude scores seen in those pharmacists who had received training are because of the fact that they have received training or whether these pharmacists already had a positive attitude towards drug misuse and that this was the reason for carrying out further training on the subject.

This is an important issue as showing that training positively influences a pharmacists' attitude towards drug misuse would provide a powerful argument to policy makers for making pharmacists' training in drug misuse a part of the undergraduate program and carrying on into their professional career.

This paper highlighted that the pharmacists surveyed did not fully understand the rational of maintenance therapy as 69.9% of respondents 'strongly agreed' or 'agreed' to the statement 'I believe drug misusers should only be prescribed controlled drugs if it is in reducing doses to help them 'come off' drugs'

This study (Matheson *et al*, 1999) was the first of its kind to test pharmacists' attitude and to demonstrate a link between attitude and service provision. It may have been of interest to ask some clinical questions around methadone pharmacokinetics and some scenarios around intoxicated clients to test the hypothesis that those pharmacists' with high attitude scores have a high level of clinical knowledge.

Matheson *et al* (2002) have recently reported on a second postal questionnaire of Scottish pharmacists carried out in 2000. They compared the results of this survey with those reported in Matheson *et al* (1999). Levels of needle exchange provision had not changed significantly (9.7% in 2000 compared with 8.6% in 1995). However, 71.5% of respondents dispense drugs for the management of drug misuse (53.2% in 1995) with an average of 13.2 clients per pharmacy (7.3 in 1995). The majority of methadone

clients consume their dose on the premises (65.1%) and the proportion of respondents who provide a supervised methadone service rose from 37% in 1995 to 82.8% in 2000.

It is clear from this research that the use of pharmacy based services for drug misusers has increased significantly in the period between 1995 and 2000. The major increases are in the areas of dispensing drugs for the management of drug misuse and the supervised consumption of methadone. This is likely to be due to the increased occurrence of 'shared care' schemes, which advocate daily methadone dispensing with supervised consumption.

Matheson *et al* (2002) also reported that pharmacists were now more proactive at providing advice and information to drug misusers and suggested that this may be due to the increased level of training that pharmacists in the latest survey report. This paper did not repeat the attitude questionnaire that was reported in Matheson *et al* (1999). This is unfortunate as a repeat of the attitude scores would have given the author greater insight into the reasons why more pharmacists are now providing a service in 2000 than were in 1995. It is not possible to deduce from the results of this survey whether an increase in positive attitude is the reason for more pharmacists now providing services to drug users or whether it is simply a result of an increasing demand for services that is *forcing* otherwise reluctant pharmacists to provide services. This is an important consideration. It is very clear form the literature generated in Scotland that demands for a community pharmacy based service for drug misusers is on the increase, and that these services are the mainstay of treatment for drug misusers.

(There is no comparison data for England and Wales as Sheridan *et al* (1996) is the most up to date survey available).

One must be mindful of the **quality** of the services provided by community pharmacies. If there are a proportion of 'reluctant' pharmacists supplying these services then one should consider the impact of this reluctance on the client using the pharmacy. There are a number of papers looking at the clients' view of a 'good' and 'bad' pharmacy service; some of these will be reviewed in section 2.9.2 on page 64.

1.8. PHARMACISTS' ATTITUDE TOWARDS DRUG MISUSERS

A number of published articles have sought to explore the pharmacists' attitude towards drug misuse and drug users, recognising that negative perceptions by health professionals of drug misusers and addiction may be a barrier to their effective involvement with this patient group.

Harding *et al* (1992) surveyed 362 community pharmacists using a postal questionnaire containing 23 attitudinal statements. This was at a time when pharmacists in the UK had been encouraged to develop and extend the range of services that they offered to the public, including drug misusers. In 1986, the Royal Pharmaceutical Society of Great Britain issued guidelines to pharmacists who wished to sell sterile injecting equipment to intravenous drug users. Against this backdrop, pharmacists were asked to rate their agreement on a five point Likert scale to a number of statements.

Encouragingly, the majority of pharmacists (77%) in this survey believed they should be more active in community-based strategies to reduce the spread of HIV and AIDS. However, pharmacists were split over the statement that 'Drug addiction is a vice, not an illness' indicating that many pharmacists do not understand the nature of addiction. More than half of the respondents believed that 'there is no excuse for intravenous drug misuse', and 40% agreed that people who take drugs are anti-social

A factor analysis of the results identified four factors that underlie pharmacists' attitudes and practices towards intravenous drug users. These were:

1. Pharmacists' views on extent of their professional role in serving IDUs – in particular problems and considerations of pursuing such a role.
2. Societal responses and perceived seriousness of injecting drug use in respect of HIV/ AIDS.
3. Pharmacists' perception of the effects of drugs on IDUs.
4. Pharmacists' role in reducing the transmission of HIV as part of an inter-professional strategy.

The authors discussed that the majority of the responses to the questionnaire indicate that pharmacists do not hold attitudes that are likely to be a barrier to the development of services to drug users, however a noteworthy proportion of pharmacists agreed with those statements aimed at under covering negative attitudes, with 40% of pharmacists stating that they do not have the knowledge to handle problem drug users.

This suggests that whilst some pharmacists have genuinely negative attitudes towards drug users, others may feel that they do not have the skills to handle this patient group and that this is the barrier to providing services.

The letters section of the 'Pharmaceutical Journal' provides an additional insight into the attitudes of pharmacists to drug users and methadone treatment. The experiences of one pharmacist and his staff who were subjected to muggings seems to have spurred

him on to providing supervised methadone consumption to benefit the greater community, by reducing drug related crime (Diamond, 2000). In a reply to Diamond, Bennett, (2000) writes to highlight the benefits of supervised methadone consumption in reducing crime and drug related deaths in Sheffield, where the supervision of methadone consumption has been aided by the development of a coordinated pharmacy service for drug users.

In a letter to the Pharmaceutical Journal, Jackson (2002) describes his frustration with the Pharmaceutical Society, stating that (in his opinion) pharmacists are the professionals qualified to speak about all drugs, including drugs of abuse, and the physiological and psychological effects of drug addiction. He states that the RPSGB should have a 'direct line' to the media to put forward the pharmaceutical facts whenever drugs and drug addiction are discussed. He argues that the profession must raise its profile as experts in this area.

The 'Letters' page also shows pharmacists' frustration at the apparent failure of supervised consumption of methadone. Crabbe (2000) feels that methadone treatment alone is inadequate. He is concerned that the continuing exposure to drug using friends and relatives means that the newly detoxed patient has little chance of abstinence from drugs, and states that: 'It might be the greatest service that we could provide for anyone following detox treatment is to insist that they move away from home'.

Another pharmacist, Finberg (2000) writes about his confusion surrounding the Misuse of Drugs Act legislation and advice from the Law and Ethics Committee regarding the supply of citric acid and similar products to injecting drug users, and asks for firm guidance for all pharmacists.

2.8.1. Barriers and Motivation to Providing Services

Matheson and Bond (1999) reported the findings of 45 telephone interviews conducted with community pharmacists in Scotland. This research aimed to qualify barriers and motivations of pharmacists to providing services for drug users.

2.8.1.1. Selling Clean Injecting Equipment

The singular motivation for the two-thirds of respondents who were prepared to sell clean injecting equipment was to reduce the need to share needles and hence limit the spread of HIV/AIDS. A third of those interviewed were not prepared to sell clean injecting equipment and the most common barrier to this was the negative effect on other customers, perhaps implying that 'other' customers were more valuable to the pharmacist than the drug user.

2.8.1.2. Participation in Needle/ Syringe Exchange

Several different motivations for providing a needle/ syringe exchange scheme are apparent from this data. The reduction in the spread of HIV and AIDS was one such motivation. Two pharmacists interviewed were concerned about the effect of discarded injecting equipment on the public at large and for this reason decided to take part in the

scheme. One pharmacist indicated that it was his 'professional duty' to provide such a service and the other indicated that participating in a needle exchange was a means of extending the professional role of the pharmacist. Barriers to providing such a service included the perceived risk to staff both from needle stick injuries and the threat posed by the drug user themselves. Others mentioned insufficient remuneration and sheer numbers as a barrier to providing a needle/ syringe exchange service.

2.8.1.3. Dispensing Controlled Drugs and Supervised Methadone Consumption

A few pharmacists' had considered the needs of the community when deciding to dispense methadone to drug users. "If you don't offer help and support to them (drug users), what are they going to do to the rest of the community". Some pharmacists' mentioned that reduction in the crime committed by an addicted person as being a motivation to dispense controlled drugs. Those respondents who were prepared to supervise consumption of methadone did so because they believed that it would help reduce leakage of prescribed methadone onto the black market.

Pharmacists who did not dispense methadone stated that there was no demand in their locality. Those who had made a conscious decision not to dispense to drug users cited the perceived negative effect on other customers, as a reason for not wishing to take part. Those pharmacists who did not supervise consumption of methadone reasoned that they did not have a private area in which to do so.

The overwhelming theme of these results is that pharmacists seem more concerned about the effect of service provision on other customers rather than the effect on not providing services on drug users. This may be the effect of an in-grained attitude that drug users are in some ways second-class citizens. (Sheridan and Barber, 1996)

2.9. DRUG MISUSERS' ATTITUDES

1.9.1. ...Towards Pharmacy Services and Pharmacists.

An early study of drug users' views and experiences of community pharmacists was conducted by Sheridan and Barber (1996). From this pilot study two main themes emerged. The stigmatisation of drug misusers either real or perceived, and secondly, the perception of the pharmacist as a provider of 'goods' such as medicines and injecting equipment, and not as a source of advice and information.

The respondents to this study felt that pharmacists made them feel like second-class patients, being made to wait, whilst other patients were served first. Some of the respondents felt that pharmacists were motivated by money "When you're paying they're really nice" as opposed to "I've had linctus, but they're (pharmacists) not very nice then because it was National Health"

Some of the drug users interviewed in the study felt that it was the pharmacists' responsibility to take control of and stop the leakage of methadone on to the black market.

Regarding attitudes towards drug users, the majority of the comments made by the drug users in this study were around the theme that pharmacists have a 'low opinion' of drug users.

Matheson (1998) interviewed 124 illicit drug users using a semi-structured interview technique.

Once again, the personality aspects of the pharmacist and pharmacy staff were most frequently mentioned. A polite and friendly attitude and being treated like any other customer was the most important aspect of a 'good' pharmacy service reported in this paper. One service user interviewed suggested that a good rapport helps to get over any perceived stigma.

Several interviewees commented on the need for privacy whilst consuming their daily dose of methadone, the time spent waiting for their dose was also an important factor with two interviewees suggesting that pharmacists deliberately kept them waiting in an attempt to aggravate them.

Some users specified that a 'good' pharmacy service was one where the pharmacist showed some flexibility with regard to picking up methadone, although this may require the pharmacist to go against legislation. Others, however, preferred a 'strict' pharmacist to prevent a prescription getting into the wrong hands.

Some users interviewed thought that the pharmacist could provide other services, such as advice and information on safer injecting, however, information requirements were often met elsewhere.

Most users seemed satisfied with the current level of service provision i.e. supervised consumption of methadone and needle/ syringe exchange. The authors suggested that this may be because of the low expectations of pharmacy service and the perception of the pharmacy as a place where drugs are dispensed and little more. It was suggested that this attitude of drug users differs little from that of other pharmacy clients and indicates the need for a publicity campaign aimed at illicit drug users to highlight the professional service that a pharmacist can provide.

These two studies highlight that illicit drug users would appear to want to be treated no differently from other pharmacy clients, and that a good rapport with the pharmacist and pharmacy staff helps to eliminate the apparent stigma attached to illicit drug misuse.

The apparent mistrust of pharmacists by drug using clients is likely to be historical. In the past pharmacist have seen themselves in a policing role where drugs of abuse are concerned, and the current Misuse of Drugs Act reinforces this. The legislation regarding handwriting requirements requires the pharmacist to have a 'legal' prescription before he is able to dispense to the client. If the prescription is missing any of its 'legal requirements' the pharmacist is placed in a difficult situation if he then decides to dispense it. A decision not to dispense may be viewed by the drug user as the pharmacist being 'difficult' or 'picky'.

2.9.2. ...Towards Methadone and Supervised Consumption

Lovell *et al* (1999) interviewed 86 clients attending a treatment service in South London. Over half of the clients interviewed agreed that the supervised consumption of methadone helped them to regulate their lives. Interestingly a larger proportion (58.8%) of those who agreed that supervised consumption helped to regulate their lives picked up from a community pharmacy. Similarly, those clients who picked up from a pharmacy felt less inconvenienced than those who visited the clinic each day.

The majority of clients (88.1%) felt that supervised methadone was a 'Good' or 'Very good' idea, with community pharmacy attendees being slightly more in favour, when asked if they (the interviewees) felt that supervised consumption reduced the amount of methadone on the street, 70.9% thought that it would.

This study found that in general, supervised consumption of methadone was acceptable to this client group, although it is difficult to extrapolate these results to the wider supervised methadone community, since all the clients in this study attended a clinic where supervised consumption was the 'norm' and therefore were not able to compare their experience of supervised consumption with anything else.

The authors of this study also noted that this sample of clients had some concerns over the lack of privacy in community pharmacies and a lack of trust of the pharmacist, this is a similar finding to that of Matheson (1998) in Scotland, and once again highlights the need for pharmacists to achieve a good rapport with the clients to alleviate some of this mistrust.

Some of Lovell *et al*'s findings are strengthened by the results of a qualitative study of 124 illicit drug users carried out by Neale (1999). Many interviewees declared that they would prefer not to be supervised, although some actually want the arrangement. A large number of interviewees reported that they did not mind, provided that there was somewhere private for them or if the shop was empty.

Interviewees in this study regarded supervised consumption to be beneficial for a number of reasons. Firstly that it afforded them a degree of personal safety as some users had in the past been mugged for their methadone, secondly that it was 'proof' that they were taking their medication and it prevented individuals form selling their prescription or abusing the system in another way. Others felt that supervised consumption helped them to stick to the programme.

Disadvantages mentioned were that supervised consumption limited the control an individual has over their medication such as the timing of the dose and amount taken. The main reason for not wanting to be supervised was the embarrassment of having to take their medication in a public place. Some described supervised consumption as an infringement of privacy and degrading. Others were worried about seeing people that they knew whilst in the pharmacy.

Overall, however, the majority of users interviewed felt that supervised methadone consumption was a positive requirement of their treatment, however others pointed out

that supervision was not for everyone, and that there should be a degree of flexibility when decided how and when a person should be supervised.

Two common themes run through the research summarized above.

1. Drug users want to be treated as 'normal' members of the public.
2. There is some 'distrust' of the pharmacist, which if overcome results in a positive relationship between client and pharmacist.
3. Most drug users who have their methadone supervised by the pharmacist would prefer a degree of privacy.

2.10. INTERNATIONAL LITERATURE ON PHARMACY SERVICES TO DRUG MISUSERS

The extent to which community pharmacy are involved in the care of drug misusers varies from country to country. This section will briefly review the international literature on services provided by pharmacists outside of the United Kingdom.

2.10.1. USA and Canada

Methadone as a treatment for opioid dependence was pioneered by Dole and Nyswander (1965) in New York City. However, there are less than 1000 methadone clinics providing treatment to approximately one-eighth of USA's opioid addicts, and some states do not permit methadone maintenance treatment (MMT). (Peterson, 1999) Those individuals who are in treatment tend to receive MMT in a hospital or outpatient setting. However, community pharmacies are not involved in the dispensing or supply of substitute medication, as it is illegal for them to do so in the USA.

In Canada, the availability of methadone in Ontario was severely limited until policy changes in 1996 increased the availability of treatment. (Strike *et al*, 2005) However, it is suggested by the authors that more efforts are needed to increase the proportion of opiate users that are in treatment. As in the USA, community pharmacists in Canada have limited involvement in service provision to drug misusers.

2.10.2. Australia and New Zealand

In Australia, pharmacies issue over half the total number of sterile needles and syringes distributed to intravenous drug users and there are approximately 23,000 patients in methadone maintenance programs, most of whom receive their methadone under the supervision of a pharmacist (Peterson, 1999). In two states, Queensland and Victoria, community pharmacy provision of methadone is virtually the only means of obtaining substitute medication. (Roberts, 2003) In 1996, Koutroulis *et al* (2000) conducted a postal questionnaire and focus group study of 188 community pharmacies in Victoria. The aim of the study was to understand how pharmacists would respond to clients who presented intoxicated. They found that male pharmacists and those pharmacies with more than 10 clients were more likely to dispense methadone to an intoxicated client. 'Insufficient communication between pharmacists and prescribers' and 'Fear of retribution from the client' were amongst the reasons cited for doing this. Although not mentioned in the paper, 'workload' appears to have an impact on the decision of whether or not to supply methadone to an intoxicated patient, perhaps suggesting that some of Victoria's pharmacies are unable to cope with the demand of dispensing and supervising consumption.

In New Zealand, people with opioid dependency are most commonly treated in community based methadone programmes, with the community pharmacist dispensing and supervising the consumption of methadone. McCormick *et al*, (2006) recently surveyed a sample of 898 community pharmacists in New Zealand (from a total of 2437 on the register of Pharmaceutical Society of New Zealand) in order to explore

levels of training and attitudes towards providing services to drug users. They found that 26% of respondents had undertaken training about the management of opioid dependence and that training (either that had had training or those who desired it) was positively associated with attitude. This finding provides further evidence that training is a factor in influencing a pharmacist's attitude to drug misusers. In contrast to Matheson (1999) who found her attitude scale to be uni-dimensional, McCormick *el al* describe an attitude scale that had four factors (dimensions) and suggest that attitudes to service provision may not be as simple as first perceived. However, it is difficult to compare these two studies as the attitude questionnaires are different.

A response was obtained from 557 pharmacists which was approximately 23% of the population of community pharmacists in New Zealand. In his discussion, McCormick suggests that the results from these respondents are generalizable (page 572) to New Zealand community pharmacists as a whole, on the basis that the age and gender of the respondents of the respondents were similar to the 2001 register. Here it could be suggested that McCormick has misused the term generalizability and is in fact talking about representativeness.

Despite this, the conclusions from the paper are broadly the same as Matheson's in that providing training to pharmacists should help to both improve the quality of the service and the attitudes of the pharmacists who provide them.

2.10.3. Europe

The extent of involvement of community pharmacies in the provision of drug misuse services varies across Europe. For example in Spain, whilst methadone is available to be dispensed by pharmacies, few do so. However, more Spanish pharmacies are involved in providing needle exchange. Italian pharmacies can sell injecting equipment and can also sell naloxone to opioid users without a prescription. This reflects the fact that treatment in Italy is primarily aimed at detoxification rather than maintenance. (Berbatis, 2003)

In France, pharmacies dispense methadone, buprenorphine and codeine to opioid addicts and participate in needle exchange programs. Bonnet (2006) describes a study in which it was demonstrated that the provision of free injecting equipment via pharmacies can reduce the number of times that a syringe is reused. The pharmacists in the study were asked to advise clients of the risks of sharing injecting equipment. The dialogue that this created allowed the pharmacists to signpost injecting drug users to local drug treatment programs.

Bonnet's research in France clearly provides evidence that the community pharmacist is a vital resource for both drug misusers seeking harm reduction measures and those who desire treatment.

2.10.4. Final Comment

Whilst the majority of the literature on pharmacy services to drug misusers is based in the UK, the international literature on the provision of pharmacy services to drug misusers clearly highlights the different approaches that individual countries have to the treatment of opioid dependence. In the USA, community pharmacies have no involvement whilst in some states in Australia; attendance at a community pharmacy is the only way of obtaining substitute medication.

As is the case in the UK, in countries where community pharmacies are involved, research has highlighted the importance of the pharmacist in the provision of harm reduction services such as methadone dispensing and needle exchange, but also the ability of the pharmacist to encourage dialogue with the drug misuser that enables them to signpost the individual to appropriate treatment services, which Bonnet describes as an *'unexpected and happy result.'* This finding suggests that the role of the pharmacist in the care of drug misusers goes beyond dispensing methadone and supplying clean injecting equipment.

Koutroulis' study of the provision of methadone to intoxicated clients (Koutroulis, 2000) suggested that some pharmacists in his study felt that there was inadequate communication between the prescriber and the pharmacist. This is an important finding, which suggests that inadequate communication between healthcare professionals involved in the care of drug misusers may result in harm to the client.

This research has relevance in the UK, and suggests that the nature and extent of communication and information sharing between doctors and pharmacists in the drug misuse team should be examined to ensure that a high quality, safe service is provided to the clients.

2.11. RESEARCH QUESTIONS ARISING FROM THE LITERATURE REVIEW

The review of the literature on the pharmaceutical care of drug misusers has prompted a number of research questions which form the basis of the research conducted for this thesis. These research questions and the objectives arising from them will now be described.

2.11.1. What is the current level of community pharmacy involvement in the provision of services to drug misusers in the South West of England?

The last survey of community pharmacy service provision to drug misusers in England and Wales was carried out in 1995. However, more recent figures from Scotland suggest that the English figures are now out of date. (Matheson, 2002)

Furthermore, Sheridan (1996) did not attempt to quantify the level of supervised consumption in English pharmacies and since this survey was conducted there have been a number of developments in drug policy in England, including the establishment of the National Treatment Agency and the publication of key Department of Health documents on the management of drug misuse.

It is therefore important to re-assess the extent of community pharmaceutical care to drug misusers in the light of these developments.

2.11.2. What is the range of attitude and knowledge of pharmacists who provide services to drug misusers?

Matheson (1999) suggested that the attitude of Scottish pharmacists towards drug misusers was influenced by whether or not they had received training on issues around the management of drug misuse with those pharmacists who had received training having a more positive attitude score than those who had not had training.

Glanz (1989) conducted a small assessment of attitude as part of his national survey; however, few conclusions could be drawn from this survey of English pharmacists'. Therefore, the research conducted for this thesis will include a more comprehensive assessment of pharmacists' attitude towards drug misusers.

There has been no attempt to quantify the level of a pharmacist's knowledge on aspects of drug misuse. This will, therefore, be attempted in the research conducted for this thesis.

2.11.3. What are the views and experiences of pharmacists, who provide drug misuse services, and service users who use pharmacy based drug misuse services and how services can be improved and developed?

There has been little qualitative assessment of the experiences of pharmacists who provide drug misuse services with the majority of the work in this area focussing on quantitative assessment of the level of pharmacy involvement.

In order to improve and develop services, it is important to understand the experiences of service providers, to ensure that recommendations for extending services are relevant and feasible.

The views of service users should also be taken into consideration when deciding how to develop or extend a service. The experiences of service users of pharmacy drug misuse services and their views on the extension of such services will be sought.

2.11.4. What are the barriers and opportunities to developing community pharmacy services to drug misusers?

Matheson and Bond (1999) described the motivations and barriers to providing pharmacy services to drug misusers and they found, amongst other motivations, that pharmacists wanted to provide services to drug misusers in order to expand their professional services. At this time, professional services to drug misusers included needle exchange and dispensing and supervision of consumption of controlled drugs used to manage opioid dependence.

Once ways to extend these current services have been sought, it is necessary to explore some of the potential barriers and opportunities to developing these ideas into practice. These barriers and opportunities will be researched from the point of view of both service provider and service user.

2.12. SUMMARY OF RESEARCH QUESTIONS AND RESULTING OBJECTIVES OF THE THESIS

The study is divided into three key areas.

1. A quantitative description of the extent of pharmacy services to drug misusers provided by community pharmacists in the South West of England. This includes a description of the practical aspects of service provision, a study of the attitudes of the pharmacists who provide such services and quantification of the depth of knowledge of these pharmacists in key areas of drug treatment.
2. A qualitative investigation of the views and experiences of community pharmacists who provide services to drug misusers, including a description of the how service may be extended and improved.
3. A qualitative investigation of the views and experiences of users of pharmacy-based services with comment on suggested improvements and extension to existing services.

The following pages summarises the research questions that resulted from the literature review and the corresponding objectives of the thesis.

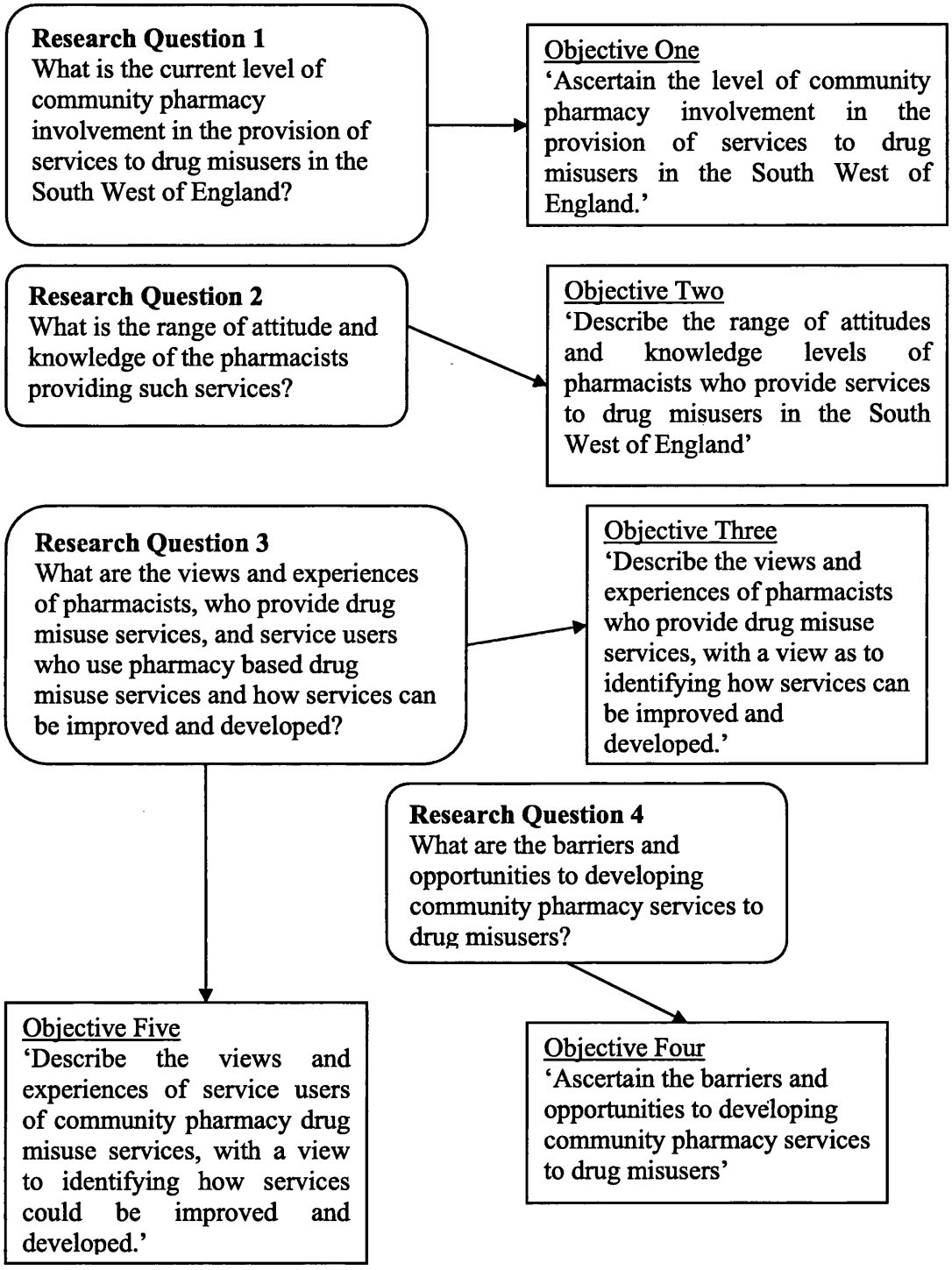


Figure 1*: Summary of identified research questions and resulting objectives*

Chapter Three

METHODS

CONTENTS

3.1. OBJECTIVES AND SELECTION OF RELEVANT METHODS

The objectives of the study have been discussed in the previous chapter. This chapter will focus on each of the objectives, with a description of the methods used to meet each objective. The rational for selecting the methods used over other potential methodologies will first be briefly given.

3.1.1. Objectives One and Two

Objective One
'Ascertain the level of community pharmacy involvement in the provision of services to drug misusers in the South West of England.'

Objective Two
'Describe the range of attitudes and knowledge levels of pharmacists who provide services to drug misusers.'

3.1.1.1. Methodology

Two quantitative methods were considered for use, the self-completion questionnaire and the structured interview. The term 'quantitative' refers to a property that exists in a range of magnitudes, such as numbers of pharmacies who provide drug misuse services, and can therefore be measured. Many attributes in the social sciences, including abilities and attitudes, can also be studied as quantitative properties.

a) Structured Interview

Breakwell (1995) defines the structured interview as '*a fixed set of questions which the researcher asks in a fixed order.*' Respondents are asked to choose from a fixed range of options given by the researcher, and this type of interview yields information which is easily quantified, ensuring that questions asked of each respondent are comparable. However, as it is pre-structured, this type of research method does not allow for unanticipated answers. It is by definition, a verbal questionnaire, used to yield a higher response rate than a self-completion written questionnaire.

b) Self-completion questionnaire

The self-completion questionnaire describes itself. It is a questionnaire, written by the researcher that is completed by the respondent. Such a questionnaire is extremely versatile as a data gathering technique and can be used to gather demographic information, to gauge attitudes and knowledge, and to obtain numerical data on the area of interest.

Bryman (2001) discusses that the self-completion questionnaire and the structured interview are very similar methods of social research, the obvious difference is that there is no 'interviewer' to administer the self-completion questionnaire and therefore the research instrument must be easy to follow, and its questions unambiguous.

The table below looks at some considerations of data collection by postal questionnaire and structured interview.

	Postal Questionnaire	Structured Interview
Cost	• Inexpensive	• Expensive in a large population
Ease of administration	• Quick (via mail)	• Time consuming
Ease of response	• Can be done at respondents own leisure • No interviewer to explain ambiguous questions	• Must be done at a mutually convenient time • Interviewer can clarify any ambiguities.
Ease of data collection	• Respondents may miss out questions leading to missing data	• Less chance of missing data
Type of question	• Mostly 'closed' questions	• Opportunity for more 'open' questions
Response Rate	• May be lower due to respondent fatigue with long questionnaires.	• Generally better than postal questionnaires

Table 4: ***Considerations of the postal questionnaire and structured interview as methods of quantitative survey research***

Using a postal questionnaire to obtain community pharmacy service provision data was considered to be the most appropriate way of getting information from a large population. (Moser and Kalton, 1986) The structured interview was considered to be too costly and time consuming for this part of the project. The inclusion of a set of attitudinal questions, measured with a five-point Likert scale was considered to be an appropriate manner to describe the range of attitudes of pharmacists who provide drug misuse services. (Oppenheim, 1992)

Previous studies that have sought to quantify levels of pharmacy service provision to drug misusers (Glanz, 1988, Sheridan, 1996 and Matheson, 1999) have used the postal questionnaire as a data collection tool. This method was also considered appropriate for

the study reported here, primarily because of the size of the population under study (n= 903 pharmacies in South West England) and cost limitations associated with the project. The use of this method will also allow tentative comparisons with past work to be made.

3.1.2. Objectives Three, Four and Five

Objective Three
'Describe the views and experiences of pharmacists who provide drug misuse services, with a view as to identifying how services can be improved and developed.'

Objective Four
'Describe the views and experiences of service users of community pharmacy drug misuse services, with a view to identifying how services can be improved and developed.'

Objective Five
'Ascertain the barriers and opportunities to developing community pharmacy services to drug misusers.'

3.1.2.1. Methodology

'Qualitative' research involves investigating participants' opinions, behaviours and experiences from the informants' points of view, as Miles and Huberman (1994) discuss; *'Qualitative methods ... a source of well grounded, rich descriptions.'*

The objectives above involve gaining an insight into individuals experience within each objective's setting. As such, it was decided that the use of qualitative methods to establish the views and opinions of both service providers (the pharmacists) and service users (the drug misuser), was the most appropriate means of data collection.

This methodology is contrasted with quantitative research in that it does not rely on quantitative measurement. In the social sciences, qualitative research is a broad term that describes research that focuses on how individuals and groups view and understand the world and construct meaning out of their experiences. It is essentially narrative-oriented and uses analysis of individuals' experiences to identify similarities and differences between them.

Two other methods of data collection were considered, these were postal questionnaires and telephone interviews. The former was considered unsuitable for qualitative data collection as a written questionnaire does not give the researcher the opportunity to prompt, probe or ask questions in order to clarify an answer. Asking open questions in the form of a self completion questionnaire can deter prospective respondents because of the amount of written material required. This in turn may lower the response rate. (Bryman, 2001) and limit the richness of data collected.

Telephone interviews were considered inappropriate for two reasons. Firstly, the telephone interview does not allow the researcher to engage in observation so that they are not in a position to respond to signs of puzzlement and unease on the part of the

person being interviewed. Some of the questions may require the interviewee to recount difficult situations and this may be more difficult over the telephone as it is less easy to build rapport with an individual than in a face-to-face situation. Secondly, whilst pharmacist interviewees would have had access to a telephone, it could not be assumed that the service users would have the same access.

Face to face semi-structured interviews with both pharmacists and service users were considered the most appropriate way of obtaining data in order to fulfill the above objectives. The nature of the semi-structured interview allows the participant to provide a fuller, richer account than would be possible with structured interview or questionnaire and allows the researcher considerable flexibility in probing interesting areas which emerge.

Analysis of Interview Content

Consideration to two qualitative analytical methods was given. These were Grounded Theory and Interpretative Phenomenological Analysis (IPA).

Grounded theory was originally described by Glaser and Strauss (1967) and was developed to study basic social processes. The central theory behind the process of grounded theory is that the themes 'evolve' from the data and therefore, in order to conduct grounded theory, the researcher should have no assumptions about the answer to the research question.

IPA is a new and still evolving method of qualitative analysis which Willig (2001) suggests is a specific psychological research method. The central theory of IPA is **how** people **experience** a particular event or situation and is associated with the work of Jonathan Smith (1995).

This method of qualitative data analysis was developed in Smith's work in the field of health psychology and he argues that IPA is concerned with trying to understand lived experience and how participants themselves make sense of their world.

It has since been used in other social research projects, including pharmacy practice. Hughes and McCann (2003) used interpretative phenomenology to describe perceived interprofessional barriers between community pharmacists and general practitioners.

This method was felt to be most relevant to understanding the experiences of pharmacists who provide services to drug misusers, as the IPA approach recognises that the researchers' own view of the world is necessary in order to make sense of the participants' experiences through a process of interpretative activity. This was also an important consideration when deciding to use IPA, as the researcher is a pharmacist with her own experiences of providing drug misuse services. This was also considered appropriate for the analysis of the service user interviews, as the researcher has worked with a number of drug misusers who have, in the course of conversation, shared their experiences with her.

3.2. METHODS

3.2.1. Postal Questionnaire of Community Pharmacists in the South West of England

3.2.1.1. Questionnaire Development

The questionnaire was based on that of Matheson *et al* (1999) with permission and adapted for use in England. A number of changes and additions were made to Matheson's original questionnaire in response to changing practices and clinical governance guidelines. The section exploring pharmacists' attitudes towards drug misusers and their treatment was expanded with questions generated from a review of the literature. A section at the end of the questionnaire asked respondents if they would like to participate further in the research. Those who expressed an interest were asked to give contacts details, allowing an 'opt-in' approach to further qualitative participation. (see Appendix One for a copy of the questionnaire)

Development of the 'Knowledge' section

The 'Knowledge' section was a novel addition to the questionnaire that aimed to explore the pharmacists' knowledge around key areas of drug misuse.

Question 28 was developed following a review of training materials on drug misuse that are available to pharmacists. Question 29 was developed to test pharmacists' understanding of the pharmacokinetics of methadone in relation to missed doses. Question 30 was developed in response to anecdotal reports of differing practices in

supervising the consumption of buprenorphine with regard to the length of time that the client is required to stay in the pharmacy. Question 31 was designed to test the pharmacist's awareness of the interaction between methadone and alcohol. This was in response to the link between the combination of methadone and alcohol and the risk of overdose. (Darke, 1996) Question 32 was designed to test the pharmacists understanding of the use of citric acid in the injection preparation process. Question 33 was designed to test whether pharmacists could distinguish between opiate intoxication and opiate withdrawal.

3.2.1.2. Pre-pilot and Pilot Studies

The first version of the questionnaire was sent to ten pharmacists known to the researcher. These pharmacists were chosen as they have experience of working with drug misusers in the community pharmacy setting. The covering letter explained that the questionnaire was a pre-pilot version and the recipients were asked to comment on the layout of the questionnaire, the ease of understanding and language and the length of time taken to respond. In response to the pre-pilot changes were made to the layout, and a front page was added giving instructions on how to complete and return the questionnaire.

Following the changes, a new version of the questionnaire was sent out to fifty pharmacies in the Berkshire area. Berkshire was chosen as the pilot region because of the existence of a well established shared care agreement (Berkshire 4-way agreement, see Walker, 2001). The covering letter explained that the questionnaire was a pilot

version and that their (the pharmacists) help was requested to develop the questionnaire for use in a larger study.

A list of pharmacies in Berkshire was obtained from the NHS website. These pharmacies were put onto an Excel spreadsheet and the random number generator function in Excel was used to pick fifty random pharmacies. The questionnaires were individually coded to allow responses to be tracked.

The pilot questionnaire was sent out in May 2003 and non-responders were followed up with another copy of the questionnaire after two weeks. Two weeks after the second mailing a further copy of the questionnaire was sent out to remaining non-responders.

The response rate of the pilot questionnaire was 32% (n=16). As this rate was lower than previous surveys of community pharmacy a telephone interview was conducted to explore why the remaining pharmacists had chosen not to respond.

The interview was conducted in order to establish why pharmacists had chosen not to respond and what would have made them more likely to respond. Of the 34 non-responders, 76.5% (26) were contacted after three telephone calls. Five pharmacies (26%) claimed they had not received a questionnaire. Of those non-responders who had received a questionnaire, 50% (13) claimed that they did not have enough time in their working day to fill in the questionnaire. Two pharmacists (7.7%) felt that the questionnaire was too long.

As a similar questionnaire had been conducted by Matheson (1999) with an adequate response rate, it was decided to proceed with the longer version with the intent of gaining maximum insight for the development of pharmacy based drug misuse services.

However, in order to ensure that maximum information on the level of service provision amongst community pharmacists was obtained, a shortened version of the questionnaire was developed. (see Appendix Two) This version would then be sent out to pharmacies who had not responded to an initial three mailings of the original (full version) of the questionnaire. By planning to maximise response in this way, accurate levels could be reported for the South West of England with due regard for the effect of non-response.

3.2.1.3. Main Survey

Compilation of the Mailing List

The mailing list for the pharmacies in the South West of England was obtained from Carol Aston, National Content Co-ordinator for the nhs.uk programme. The number of pharmacies obtained in this way correlated with the number of pharmacies reported by the Department of Health (2001) at 903 pharmacies. Addresses of the pharmacies were categorised according the NHS Primary Care Trust (PCT) in which they were situated. As in the pilot survey all questionnaire were individually coded so that responses could be tracked. The codes were based on the PCT in which the pharmacy was based. For

example, BNS 1 referred to the first pharmacy in the mailing list for Bath and North East Somerset PCT.

Timeline of the mail-out

In September 2003, the finalised questionnaire (Appendix 1) was mailed out to 903 pharmacies in the South West of England. The questionnaire was sent, along with a FREEPOST return envelope, covering letter and entry to a prize draw in return for responding to the questionnaire. Respondents were able to choose from three potential prizes.

1. Hot Air Balloon Trip for one person
2. Marks and Spencer's vouchers to the value of £100
3. A copy of Drug Interactions, by Stockley.

The addition of the prize draw was an incentive to pharmacists to complete the questionnaire. This method of increasing response rate has been used in previous studies involving community pharmacists. (Smith, 2002)

In November 2003, a reminder letter and copy of the questionnaire was mailed to all non-responders from the first mail-out. They were also sent a FREEPOST envelope for the reply and a further prize draw entry form.

In January 2004, a second reminder letter was sent out with a further copy of the questionnaire. Included were a FREEPOST envelope and a sachet of instant coffee. The letter asked the pharmacists to have a coffee break during which they could fill in

the questionnaire. This method of improving response rate has been used previously in pharmacy practice research (Smith, 2002). It was felt to be pertinent to this study, as the results of the pilot study suggested that the questionnaire could be completed in fifteen minutes.

In March 2004 a shortened version of the original questionnaire (Appendix 2) was sent to those pharmacists from whom a response had not been received. The shortened questionnaire focussed on the quantitative data regarding service provision and did not include any free response questions or the section exploring attitude. The focus on service provision was justified by the need to obtain as many responses as possible in order to make meaningful observations on the level of service provision to drug misusers by pharmacies in the South West.

3.2.1.4. Management of Questionnaire Data

An Excel spreadsheet was constructed for each PCT and the response was noted when a questionnaire was returned.

A database was set up by the author in a Statistical Package for the Social Sciences, SPSS for Windows (SPSS, version 11). The questionnaire was coded so that data could be input into the database and data entry was performed by the author. Once all the data had been input, the database was checked for errors by randomly selecting 35 (1 in 20 sample) returned questionnaires. The database was also checked for 'extreme outliers',

for example as a result of slips of the finger during data entry, e.g. '44' instead of '4'. The data check identified very few errors indicating that data entry had been accurate.

3.2.1.5. Analysis of the Attitude Scale

Assessment of Range of Responses and Plotting of Scores for Statistical Analysis

Firstly, the frequency of responses to each statement was assessed to determine if there was a spread of opinion, as would be expected in a normal population. Then, a total score was calculated for each respondent by reversing negative statements (41, 42, 43, 44, 46, 47, 48, 50, 51, 53, 54, 58, 59, 66) then totalling the score for each statement (+2 strongly agree to -2 for strongly disagree). Total scores were plotted for each respondent and the 'normality' of the distribution was assessed by calculating the skew of the resulting curve. The attitude scale was contained in the full version of the questionnaire; therefore attitude scores were only calculated for those respondents to the first three mailings of the questionnaire. Subsequent analysis of attitude refers, therefore, to the respondents of the full version.

Reliability of Attitude Scale

Reliability is the extent to which a measure (the attitude scale) produces the same measurement in the same individual at different point in time. It was not possible to re-test the scale (test-retest reliability) in the same population because this may have resulted in survey fatigue in the population (Oppenheim, 1992). The measurement of attitude in this manner is a 'single point in time' measure; it is not possible to control interim factors that may influence attitude between re-tests. Therefore, the overall

correlation between statements or internal consistency of the scale was assessed by determining the Cronbach's alpha co-efficient. This was calculated in the following manner.

The scores for negatively worded statements in the attitude scale were reversed and the Cronbach's alpha co-efficient was calculated using the method described in Pallant, 2001 using SPSS version 11. The output was examined to ensure that the correct number of items had been included in the analysis, and the impact of removing items with low item-total correlation from the scale was considered.

Validity of Attitude Scale

Construct validity was assessed by considering whether the responses to individual statements were consistent with the theoretical framework (Oppenheim, 1992). For example, it was expected that those respondents who provided a supervised consumption service would disagree with the statement 'I believe supervising consumption of CDs by drug misusers on the pharmacy premises is an inappropriate role for the community pharmacist'.

A factor analysis was conducted as an assessment of psychometric validity (Streiner and Norman, 1995). Factor analysis is an analytic statistical tool which may help to ascertain what (if any) are the chief underlying dimensions of a set of responses, in this case, responses to the attitude statements (Oppenheim, 1992).

SPSS (version 11) was used to conduct the factor analysis using the method described in Pallant, 2001. The data was firstly examined for suitability for a factor analysis by calculating Bartlett's test of sphericity and the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy.

A principle component analysis was used to extract factors from the item population and using Kaiser's criterion and the scree test the least number of factors that best described the underlying relationship among the variables was determined. These factors were then rotated orthogonally using the Varimax method available in SPSS version 11.

The resulting statements within each factor were interpreted and tested for internal reliability using Cronbach's alpha co-efficient using the same method as described above.

3.2.1.6. Analysis of Knowledge and Training Data

A 'knowledge score' was computed for each respondent to the full questionnaire. The marks awarded to each question are shown in the table below.

Question	Correct Answer	Mark
28 a) 5mg of methadone could be fatal to an opioid naïve adult b) Taking benzodiazepines with methadone will help with withdrawal c) 10mg of methadone could kill a child d) Opiate overdose may cause respiratory depression, coma and death	False True True True	1 1 1 1
29 How long (days) on average does a persons tolerance to methadone decrease to the point where the original dose may cause toxicity?	Three days	1
30 When supervising consumption of Subutex (buprenorphine) how long does it take for the full dose to be absorbed from the mouth?	Until tablet is dissolved	1
31 A drug user arrives at your pharmacy for his daily dose of methadone showing obvious signs of alcohol intoxication. What should you do?	Come back when sober	1
32 People who misuse heroin may ask to buy citric acid. Why is this?	To dissolve street heroin	1
33 Please list three signs of opiate intoxication	1 sign 2 signs 3 signs	1 2 3
34 Please list three symptoms of opiate withdrawal	1 symptom 2 symptoms 3 symptoms	1 2 3

Table 5*: Marks awarded to each correct answer in the 'Knowledge' section of the questionnaire (max 15)*

3.2.3. Semi-Structured Interviews with Community Pharmacists

3.2.2.1. Development of the Interview Schedule

The interview schedule (see Appendix Four) comprised six themes and topics for discussion. It was developed from the analysis of the free response questions (question numbers: 12, 13f&g, 15, 19d, 21, 22, 25 and 36) in study one. Questions one and two of the interview schedule were concerned with the role of the pharmacist and pharmacy staff in the care of drug misusers. Questions 3-9 were concerned with the provision of

services to drug misusers whilst questions 10-12 were designed to obtain an understanding of the pharmacists' wider knowledge of the field. Questions 13-20 explored 'problems and positives' about providing services to drug misusers and questions 21-23 examined the pharmacists' experience of the support that they received in order to provide these services. The final two questions examined whether pharmacists felt recognised for their role in drug misuse treatment and what they would like to see included in a model of care for pharmacy based drug misuse services.

3.2.2.2. Ethical Approval

Ethical approval was sought from the Central and South Bristol Research Ethics Committee in March 2004 and was granted in July 2004. (see Appendix Three)

3.2.2.3. Pilot Interview

The interview schedule was piloted on a pharmacist known to the researcher but unconnected with the project. The pilot ran smoothly and the interviewee stated that he had understood the questions being asked and felt able to give full answers. As a result of the pilot, the interview schedule was not changed and the pilot interview was included in the final analysis. It was not felt necessary to conduct further pilot interviews. The pilot interview lasted forty minutes so potential interviewees were asked to allow one hour for their interviews.

3.2.2.4. Recruitment of Participants

Interviewees were recruited from respondents to the postal questionnaire in study one who expressed an interest in participating in further research. Initially, letters were sent to those respondents who sent the questionnaire back from the first mail out, and then those respondents who responded to the second mail out were contacted. An initial letter explaining the research was posted to the potential interviewees. This also contained a 'participant information sheet' and a consent form. Potential interviewees were given the option to opt out of the research by faxing a form to the researcher.

Pharmacists who had responded with a willingness to be interviewed were contacted by telephone a week later and a date was agreed for the interview. Potential interviewees were assured that the contents of the interview would remain confidential and written consent was obtained before the interview commenced in order that it could be tape-recorded and subsequently transcribed.

3.2.2.5. Conduction of the Interview

The interviews were conducted at locations that were suitable for the individual participants. The interviews occurred mainly at the participant's place of work and the interviews lasted between half to one hour. At the end of the interview, the tape-recorder was switched off and the researcher was able to answer any questions about the research that the interviewee raised. After each interview, the researcher made notes about any thoughts that she had on the content of the interview. The tapes were professionally transcribed and the researcher checked each one by listening to the tapes

and reading the transcription at the same time. Minor alterations were made where the transcriber had missed words or failed to hear the tape clearly. At this time all identifiable information contained in the transcription was either removed or anonymised.

3.2.2.6. Data Analysis

The transcriptions were analysed using IPA, as described in section 3.1.2.1. on page 77. Smith (1999) provides researchers with clear guidelines which allow for the identification and progressive integration of themes. Data analysis began by reading the transcripts in order to get a 'feel' for the data. The transcript was converted to *rich text format* which allowed it to be imported into the computer software package QSR NUD*IST VIVO (NVIVO) version 2.0 (QSR International). This package was chosen following the researchers attendance on a training course organised by the CAQDAS Networking Project at the University of Surrey. The package was easy to use and allowed the researcher to carry out the initial coding and subsequent theory building.

Some categories had been identified from study one and these were used during the initial coding of the data. Subsequent categories were developed from the transcript itself (so called *in-vivo* codes). Each transcript was treated in a similar manner.

Theming

The initial analysis allowed categorisation of the contents of the transcript into distinct categories (for example: views..., problems..., positives..., practical aspects...). Each category was summarised using the software package so that a print-out which included

the category, participant and quote could be produced. Each individual category was examined and emergent themes produced.

Clustering

This stage of IPA introduces structure to the analysis. Each initial category was examined along with the emergent themes and the association between them was considered. This was carried out using post it notes to represent the sub-themes. These were placed into clusters on a whiteboard, paying attention to the part of the transcript from which the theme emerged so that the 'meaning' of the theme was not lost during clustering. This exercise was carried out with the advice of a researcher in the Department who has extensive experience of qualitative data analysis, in order to examine the data in a context other than the computer software package.

3.2.3. Semi-structured Interviews with Service Users

3.2.3.1. Development of the Interview Schedule

The interview schedule (Appendix Six) was developed as a result of the analysis of the pharmacists interviews. In this way the experiences of both parties were explored.

The interview schedule was divided into two parts.

1. Experience of Pharmacy Services

Participants were asked about their experiences of community pharmacy services such as supervised methadone consumption and needle exchange. In view of the recognition that pharmacists often see drug misusing clients more often than other healthcare

professionals, participants were asked if they ever used the pharmacist as a source of advice, either on minor illnesses or issues associated with their drug use. Participants were also asked why individuals sometimes missed picking up doses of methadone, and why they thought pharmacists sometimes had to withhold doses. These two questions were posed in the form of vignettes, so that the participant could answer without the need to relate their own experiences.

2. Development of Pharmacy Services

This section of the interview schedule arose from the analysis of the interviews with the pharmacists. It was designed to explore the views of the service users as to how drug misuse services provided by community pharmacists could be improved. For example, service users were asked about information sharing between the pharmacist and prescriber or drugs worker. This was in response to the suggestion by some pharmacists that more information about the client would help them provide a better service to them. Other topics around the development of the pharmacy service included:

- The 'law' surrounding prescriptions
- Use of contracts
- Improving supervised consumption
- Suggestions of training topics for pharmacists and support staff
- Views on prescribing of methadone by pharmacists.

3.2.3.2. Ethical Approval

Ethical approval for the service user interview study was sought from the Nottingham Research Ethics Committee (2) as the next available REC available through the Central Allocation System at CoREC. (see Appendix Five)

3.2.3.3. Recruitment of Participants

Five pharmacists, who took part in the pharmacist interview study described above, were approached and asked if they would allow the researcher to conduct interviews with a self-selecting group of their drug-misusing clients. This was a purposive sample based on location of the pharmacy and the availability of a private area in which to conduct the interview.

An information sheet in a question/ answer format was sent to participating pharmacies with a request that they be handed out to their drug misusing clients. It is stressed that pharmacists were NOT asked to recruit interviewees themselves, as it is possible that some clients may have felt coerced into taking part if recruitment had been carried out by the pharmacist who provided the service. The leaflet made it clear that that participating interviewees would not be asked for their name, and this information would not be recorded on any written or electronic material.

At least two days after the leaflet handout, the researcher attended the pharmacy and recruited interested clients for interview. Potential interviewees were approached by the researcher as they attended for their prescription, or for needle exchange. Clients were

identified to the researcher by the pharmacist. Potential interviewees were asked if they had had a chance to read the leaflet on the research, and if they had, were asked if they would like to be interviewed. Most interviews were conducted immediately, but some interviewees made appointments to come back later that day. Written consent was obtained by the participant filling in a consent form. Initials were used to preserve anonymity.

3.2.3.4. Conduction of the Interview

The interview was conducted in a private room on the pharmacy premises. The interview was audio taped with the interviewee's consent. The target number of interviewees per pharmacy was three (15 in total). Each interview lasted about 1/2 hour depending on the nature of the interviewee's responses.

By means of a 'thank you' for taking part in the interview, the interviewee was be offered a choice of gift voucher for redemption in a local retailer (e.g. Superdrug, Tesco, Boots or Asda). The value of the gift voucher was £10.00.

3.2.3.5. Transcription and Analysis of Data

The interview data generated in this study was transcribed *verbatim* and analysed using Interpretative Phenomenological Analysis (IPA) in the same manner as the pharmacist's interviews (see sections 3.2.2.5 and 3.2.2.6. on pages 92-93). Emergent themes arising from the interviews were generated and are presented in the 'Results' chapter. (section 4.3 on page 161)

3.3. SUMMARY OF OBJECTIVES AND METHODS

The figure below summarises the five objectives of this thesis, and the methodologies employed to answer the objectives.

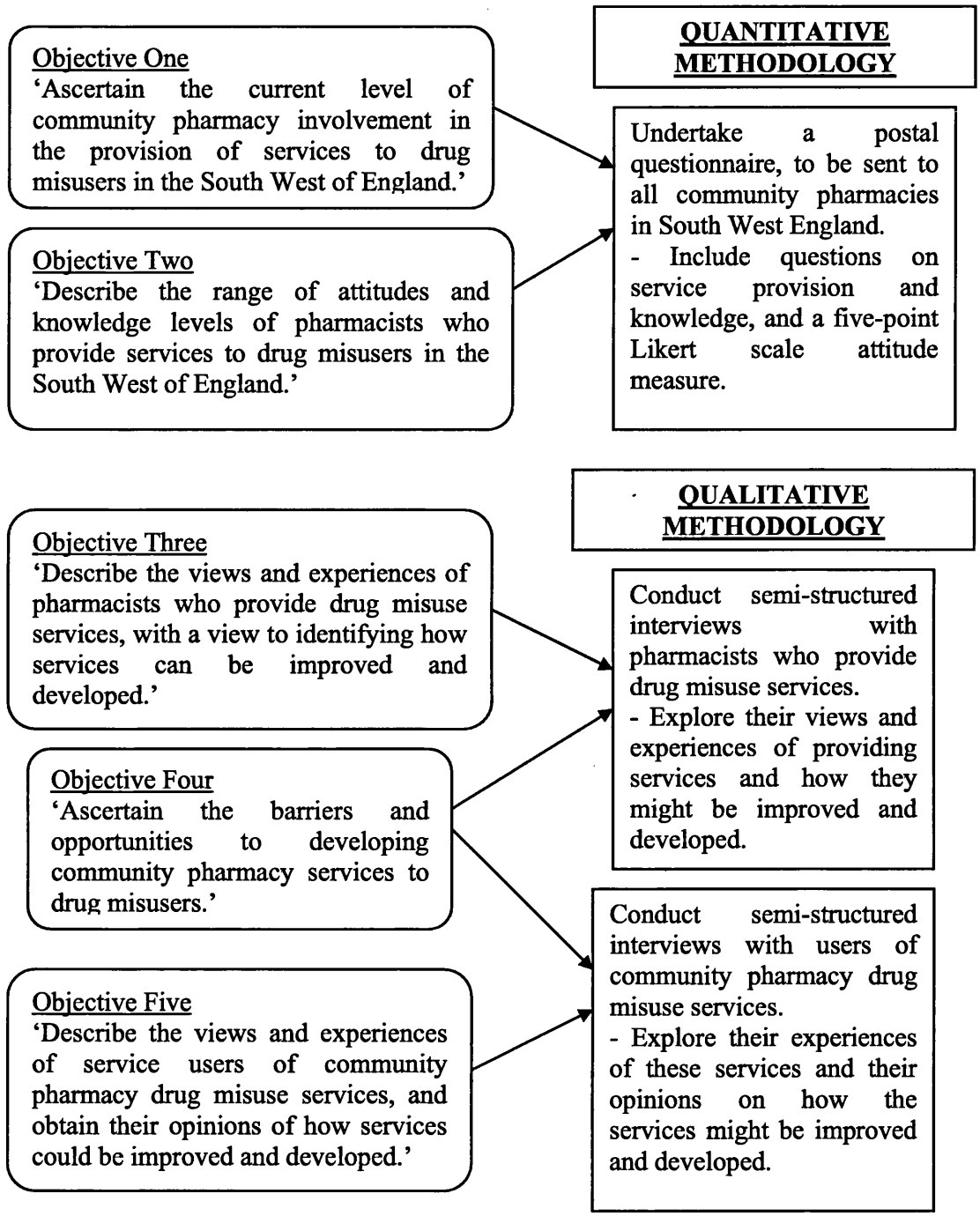


Figure 2: ***Diagrammatic representation of the objectives of the thesis and the methodologies employed to attain***

Chapter Four

RESULTS

CONTENTS

4.1. COMMUNITY PHARMACY POSTAL SURVEY

4.1.1. Response Rate

Response rates are shown in Table 6 below; the response rate after three mailings was 60%. After the fourth mailing of the shortened version of the questionnaire, the response rate increased to 78%.

Mailing	Questionnaire Version	Cumulative Response (%)	Increase in Response (%)
1 – September 2003	Full	362 (40%)	-
2 – November 2003	Full	458 (51%)	96 (11%)
3 – January 2004	Full	545 (60%)	87 (9%)
4 – March 2004	Shortened	707 (78%)	162 (18%)

Table 6: ***Response and increase in response rate per mailing of the postal questionnaire: 'Community Pharmacy Services to Drug Misusers'***

4.1.2. Demography of Pharmacies and Pharmacists

The demographic details reported below refer to the analysis of the first three mailings of the questionnaire. The forth mailing of the shortened version of the questionnaire did not include any demographic details.

An almost equal number of male (48%) and female pharmacists (50%, 2% missing) responded to the questionnaire (Table 7), and the mean age of respondents was 41.3 (Standard Deviation (SD) 11.9). (Table 8)

Respondents had been on the Pharmaceutical register an average of 17.6 years (SD 12.5 years) and had spent on average 6.5 years (SD 7.9 years) working in the pharmacy to which the questionnaire was sent. (Table 8) The majority of respondents (56.7%, n=313) reported working for a large multiple pharmacy chain.

(Table 9) The majority of the pharmacies who responded described their location as 'Small Town' or 'Urban' (71.2%, n=387). (Table 10)

The majority of pharmacists who responded to the questionnaire indicated that they had some decision making responsibilities with 45.5% (n=247) of respondents having sole responsibility, 37.6% (n=204) having decision making responsibilities in conjunction with someone else, and 15.8% (n=86) of respondents reported having no decision making responsibilities. (Table 11)

Most of respondents (65%, n=353) reported being 'employees' in the pharmacy in which they worked. Pharmacy owners accounted for 21% (n=114) of respondents, and locums accounted for 11.2% (n=61) of respondents. (Table 11)

GENDER OF RESPONDENT	AGW* n=233 (%)	DS** n=126 (%)	SWP*** n=184 (%)	TOTAL n=543 (%)
Male	101 (43.3)	66 (52.4)	94 (51.1)	**261 (48.0)**
Female	128 (54.9)	58 (46.0)	85 (46.2)	**271 (50.0)**
Missing values	4 (1.8)	2 (1.6)	5 (2.7)	**11 (2.0)**

* Avon, Gloucestershire and Wiltshire Strategic Health Authority
** Dorset and Somerset Strategic Health Authority
*** South West Peninsula Strategic Health Authority

Table 7: ***Gender of Questionnaire Respondents***

	Mean Age (SD)	Mean Years Registered (SD)	Mean Years at Present Pharmacy (SD)
AGW	40.3 (11.6)	16.8 (12.1)	6.5 (7.6)
DS	41.3 (11.7)	17.3 (12.5)	5.8 (6.3)
SWP	42.6 (12.4)	18.9 (13.0)	6.9 (7.9)
TOTAL	*41.3 (11.9)*	*17.6 (12.5)*	*6.5 (7.4)*

Table 8: ***Age, Years Registered and Years at Present Pharmacy of Questionnaire Respondents***

TYPE	AGW n=233 (%)	DS n=126 (%)	SWP n=184 (%)	TOTAL n=543 (%)
Single Outlet	41 (17.6)	25 (19.8)	36 (19.6)	**102 (18.8)**
Small Multiple (2-9 branches)	54 (23.2)	21 (16.7)	23 (12.5)	**98 (18.0)**
Large Multiple	127 (54.5)	74 (58.7)	112 (60.9)	**313 (57.6)**
Health Centre	8 (3.4)	5 (4.0)	11 (6.0)	**24 (4.4)**
Missing values	1 (0.4)	1 (0.8)	2 (1.1)	**4 (0.7)**

Table 9: ***Type of Pharmacy Business***

LOCATION	AGW n=233 (%)	DS n=126 (%)	SWP n=184 (%)	TOTAL n=543 (%)
Rural	12 (5.2)	11 (8.7)	7 (3.8)	**30 (5.5)**
Village	25 (10.7)	18 (14.3)	31 (16.8)	**74 (13.6)**
Small Town	65 (27.9)	59 (46.8)	88 (47.8)	**212 (39.0)**
Urban	99 (42.5)	30 (23.8)	46 (25.0)	**175 (32.2)**
City Centre	29 (12.4)	7 (5.6)	9 (4.9)	**45 (8.3)**
Missing values	3 (1.3)	1 (0.8)	3 (1.6)	**7 (1.3)**

Table 10: ***Pharmacy Location of Questionnaire Respondents***

RESPONSIBILITY	AGW n=233 (%)	DS n=126 (%)	SWP n=184 (%)	TOTAL n=543 (%)
Yes – Sole Responsibility	103 (44.2)	62 (49.2)	82 (44.6)	**247 (45.5)**
Yes – With Someone Else	92 (39.5)	45 (35.7)	67 (36.6)	**204 (37.6)**
No	37 (15.9)	17 (13.5)	32 (17.4)	**86 (15.8)**
Missing values	1 (0.4)	2 (1.6)	3 (1.6)	**6 (1.1)**

Table 11: ***Decision-Making Responsibility of Questionnaire Respondents***

STATUS	AGW n=233 (%)	DS n=126 (%)	SWP n=184 (%)	TOTAL n=543 (%)
Owner	52 (22.3)	23 (18.3)	39 (21.2)	**114 (21)**
Locum	21 (9.0)	15 (11.9)	25 (13.6)	**61 (11.2)**
Employee	155 (66.5)	84 (66.7)	114 (62.0)	**353 (65)**
Superintendent	4 (1.7)	3 (2.4)	4 (2.2)	**11 (2.0)**
Missing values	1 (0.4)	1 (0.8)	2 (1.1)	**4 (0.7)**

Table 12: ***Status of Pharmacist Respondents***

4.1.3. Part One – Level of Involvement with Drug Misusers

4.1.3.1. Suspected Misuse of 'Over the Counter' (OTC) products

Those pharmacists who responded to the full version of the questionnaire were asked whether they believed 'over the counter' (OTC) products were being misused in their local area. 70.6% (n=382) believed that, yes, OTC products were being misused. 22.0% (n=119) did not think that OTC products were being misused in their locality whilst 6.5% (n=35) replied that they did not know. (5 respondents did not answer the question)

Of those respondents who believed that OTC products were being misused, 86.9% (n=332) mentioned opiate containing products such as Kaolin and Morphine and codeine linctus; 36.6% (n=140) mentioned sedative antihistamines found in products such as Nytol™ (diphenhydramine) and Night Nurse™ (promethazine) whilst 18.1% (n=69) mentioned laxatives such as senna and bisacodyl. Other OTC drugs were mentioned by 11.5% (n=44) including 18 respondents who listed citric acid.

Most respondents who believed that OTC product were being misused in their area had a sales policy relating to these products. (96.8%, n=370) Most commonly, lines that were believed to be being misused were not stocked or hidden from the customers view. (36.5%, n=135). Other 'policies' are shown in Table 13.

POLICY	No. of respondents (%)
Hide or do not stock certain products	135 (36.5)
Monitor sales to suspected misusers	78 (21.1)
Refer requests for certain products to the pharmacist	54 (14.6)
Counsel suspected misusers of OTC products	50 (13.5)
Refuse sale of products to suspected misusers	38 (10.2)
Staff use a 'sales of medicines' protocol	12 (3.2)

Missing values = 3

Table 13: ***Reported 'policies' for managing OTC products with misuse potential (n=370)***

4.1.3.2. Sale of needles and syringes to known or suspected intravenous drug users (IDUs)

Analysis of responses to both full and abridged versions of the questionnaire (n=707) showed that 19.1% (n=135) of respondents were prepared to sell needles and syringes to known or suspected IDUs and currently did so, with a further 31.4% (n=222) prepared to sell needles and syringes to known or suspected IDUs, but reported that they had not been asked to do so in the past week. This gave a total of 50.5% (n=357) of respondents willing to sell needles and syringes to IDUs. (data missing from 10.0%, n=71 respondents)

The full version of the questionnaire explored why respondents sold needles and syringes to injecting drug users. The most common reason given for selling needles and syringes was '*harm reduction*' (20.3%, n=110), followed by '*inadequate local needle exchange facilities*' (4.8%, n=26).

42.3% (n=299) of respondents were *not* prepared to sell needles and syringes to known or suspected IDUs. (Data from full and abridged versions, n=707 responses)

The most common reasons cited for this was that there was '*needle exchange location nearby*' (15.9%, n=86) and '*no returned sharps facilities*' (7.8%, n=42). (Data from full version, n=545 responses)

4.1.3.3. Provision of needle/ syringe exchange services

One hundred and seven respondents (15.1%, data from full and abridged versions) said their pharmacy was part of a needle exchange scheme. In the week prior to responding to the questionnaire, they supplied needle exchange services to an estimated 2254 individuals. This gives an average of 21 clients per week (min 1, max 150, mode 20 clients), with four pharmacists reporting more than 100 clients per week.

Of the 107 respondents who reported running needle exchange schemes, 53.3% (n=57) said that they and their staff had received vaccination against Hepatitis B and 74 (69.1%) needle exchange pharmacies had had training on the scheme.

Respondents to the full version of the questionnaire who did not provide a needle exchange scheme (n=448) were asked, in a free response question why they did not. Of these, 413 gave reasons. The most common reason was that the respondent perceived that there was *'no demand'* for the service (29.3%, n=130), whilst 80 respondents said that they did not provide the service because it was '*already available locally'* (18.0%). Fifty two respondents (12.6%) felt that their *'premises were unsuitable.'* Thirty respondents did not provide a needle exchange scheme because of a *'previous bad experience'* (6.7%), whilst 39 (9.4%) said that they *'had not been asked'* .

In a similar free response question, respondents not currently providing a needle exchange scheme were asked what would encourage them to do so and 337 gave answers. Most said that they would consider providing the service if an *'increase in demand'* could be demonstrated. (32.0%, n=108) and 67 (19.9%) said they would be encouraged if there was *'funding'* available. Ninety-seven respondents (21.8%) replied that *'nothing'* would encourage them to provide such a scheme.

4.1.4. Part Two – Methadone Dispensing and Practical Aspects

4.1.4.1. Provision of Methadone Services

The results shown in Table 14 are from the analysis of both the full and abridged versions of the questionnaire. Of the 78.3% (n=707) of pharmacies who replied to the questionnaire, 69.2% (n=489) reported providing methadone services to a total of 3427 drug misusers with a mean number of 7.0 clients per pharmacy. Of the 489 pharmacies who dispensed methadone, 70.1% (n=434) also reported supervising consumption.

Over 90% (92.1%, n=3155) of these clients were reported to have been receiving their methadone at the responding pharmacies for one month or more. In total, 49.5% (n=1697) of these clients were receiving their dose of methadone by supervised consumption with a mean number of 4.9 supervised clients per pharmacy.

	AGW	DS	SWP	TOTAL
Number of Pharmacies	383	219	301	**903**
Number of Respondents	305	162	240	**707**
% Response	79.6	73.9	79.7	**78.3**
% of respondents providing services	69.2	66.6	70.8	**69.2**
Number of methadone clients	1773	717	937	**3427**
Number of 'regular clients' (%)	1608 (90.6)	649 (90.5)	898 (95.8)	**3155 (92.1)**
Number of clients on supervised consumption (%)	1069 (60.3)	279 (38.9)	349 (37.2)	**1697 (49.5)**
Mean number of clients per pharmacy	8.4	6.6	5.5	**7.0**
Mean number of clients on supervised consumption/ day	6.6	3.6	3.4	**4.9**

Table 14: ***Provision of methadone services to drug misusers shown by StHA and the south west region as a whole***

In the full version of the questionnaire, respondents were asked further questions about the supply of methadone to drug misusing clients. Of the 385 methadone dispensing respondents who replied to one of the first three questionnaire mailings, 52.7% (n=203) reported that they had stopped dispensing methadone to one or more drug misusing clients. Of those pharmacists who had stopped dispensing to an individual, the most common reason for this was that the individual had been abusive or had engaged in shoplifting from the pharmacy. (64.5%, n=131). Thirty two pharmacies (15.7%) reported that they had stopped dispensing methadone to one or more clients because they had missed doses and 11 pharmacies (5.4%) had stopped because the client was 'in breach of their contract'. Twenty nine pharmacies (14.3%) did not give reasons.

Similarly, in responses to the full questionnaire, 138 of the 385 methadone dispensing pharmacies (35.8%) reported having to withhold one or more doses of methadone to a client, with the most common reason being that the client presented to the pharmacy in an intoxicated state. (36.4%, n=50) Other reasons included 'missed previous doses' (21.7%, n=30), 'arrived late' (15.9%, n=22) and 'instructed

by the prescriber' (12.3%, n=17). Nineteen pharmacies (13.7%) did not give reasons.

One hundred and eighty-nine methadone dispensing pharmacies who responded to the full version reported supervising other drugs, with 182 supervising buprenorphine and 11 supervising the consumption of benzodiazepines.

4.1.4.2. Practical aspects of providing services

Standard Operating Procedures

Both the full and abridged versions of the questionnaire asked respondents who reported dispensing methadone (n=489) to indicate whether they had standard operating procedures in place in their pharmacies for dispensing Controlled Drugs and supervising their consumption. 42.9% (n=210, 21 missing responses) had an SOP for dispensing Controlled Drugs and 40.8% (n=200, 27 missing responses) reported having an SOP for supervising consumption.

Private Areas

Of those pharmacies who responded to the full version of the questionnaire, and who provided a methadone dispensing service (n=385), 46.5% (n=179) reported having a private area that could be used to supervise consumption of methadone and/ or other drugs. One hundred and thirty-eight pharmacies with a private area (77.1%) responded that they 'always' offered use of the private area to clients required to consume on the premises. Of the pharmacies who did not have a private area (n=197), 50 (25.4%) said that one or more client had commented that they would like more privacy than was available when they were consuming their

methadone. Nine pharmacies (2.3%) did not provide information about the existence of private areas in the pharmacy.

Methadone Dispensing and Supervision of Consumption

Table 15 below lists some 'desirable' practices that may occur when providing methadone services and quantifies how many of the respondents to the full version of the questionnaire, who provide a methadone dispensing service, always, sometimes or never engage in these practices.

Laying down ground rules with new clients was common practice with 278 pharmacies (72.2%) always doing this. These ground rules were usually backed up by the use of a written contract, always: 31.1%, n=120 and sometimes: 26.7%, n=103 and, 40.2% (n=155) of respondents reported never using a written contract. Most pharmacies always or sometimes asked for identification on the first occasion that the client presents a methadone prescription, (79.4%, n=306) but did not continue to ask for identification on subsequent collections (70.6%, n=272).

Most pharmacies always made up prescriptions in advance of the client attending the pharmacy with only 53 respondents (13.8%) reporting that they never did this. 87.8% (n=338) of respondents reported that they 'always' treat drug misusers the same as other customers with 2.3% (n=9) reporting that they never did.

Of those pharmacies who responded to the full version of the questionnaire and who supervised consumption of methadone (n=319), 95% (n=303) reported providing

water after the dose of methadone had been taken, with most always providing this in a disposable cup (63.3%, n=192).

Health Promotion

Those respondents to the full version of the questionnaire, who provided a methadone dispensing service, were asked to indicate how regularly they provided health promotion information (written or verbal) on drug misuse and HIV prevention. Those reporting 'always' providing written literature were, in general, lower than those providing verbal information. (Table 16)

	Always (%)	**Sometimes (%)**	**Never (%)**	**Missing (%)**
Lay down ground rules for a new person with a methadone prescription	278 (72.2)	75 (19.5)	25 (6.5)	7 (1.8)
Have a written contract with drug misusers	120 (31.1)	103 (26.7)	155 (40.2)	7 (1.8)
Ask drug misusers for identification on their first visit	215 (55.8)	91 (23.6)	72 (18.7)	7 (1.8)
Ask for identification each time a client collects a supply	13 (3.4)	89 (23.1)	272 (70.6)	11 (2.8)
Make up prescriptions in advance	182 (47.2)	144 (37.4)	53 (13.8)	6 (1.5)
Provide plastic measures with prescriptions that are taken away	42 (10.9)	196 (50.9)	138 (35.8)	9 (2.3)
Treat drug misusers the same as other customers	338 (87.8)	32 (8.3)	9 (2.3)	6 (1.5)
If you supervise consumption, do you: ...provide water after the dose is swallowed	194 (60.8)	109 (34.2)	16 (5.0)	-
... in a disposable cup?	192 (63.3)	55 (18.1)	53 (17.5)	3 (0.9)

Table 15: ***Practical Aspects of Methadone Dispensing (n=385)***

	Always (%)	Sometimes (%)	Never (%)	Missing (%)
Supply information leaflets concerning drug misuse to new drug misusing clients	16 (4.1)	112 (29.1)	252 (65.4)	5 (1.3)
Supply information leaflets concerning methadone to new clients who present with a prescription for methadone	16 (4.1)	79 (20.5)	285 (74.0)	5 (1.3)
Supply information leaflets concerning HIV prevention to new drug misusing clients	8 (2.1)	55 (14.3)	315 (81.8)	7 (1.8)
Offer face to face advice on the management of drug misuse	44 (11.4)	188 (48.8)	147 (79.4)	6 (1.5)
Offer face to face advice concerning methadone	53 (13.8)	217 (56.3)	109 (28.3)	6 (1.5)
Offer face to face advice on HIV prevention	22 (5.7)	108 (28.0)	248 (64.4)	7 (1.8)

Table 16: ***Health Promotion Activities of Methadone Dispensing Respondents to the Full Questionnaire (n=385)***

4.1.5. Part Three - Knowledge and Training

4.1.5.1. Knowledge

Respondents scored an average of 8.4 (SD 2.8, Max 15, Min 0) on questions 28 to 34. The range of the respondent's scores was normally distributed, as shown in Figure 3. Of note was that 298 (56.3%) of respondents were *'Unsure'* how many days (on average) an individual could miss their dose of methadone before their tolerance to that dose would decrease. (Question 29 – Table 18). Just under half of the respondents to the full questionnaire knew that citric acid was used to dissolve street heroin (Question 32 - 42.5% (n=225). Interestingly, respondents were less able to list signs of opiate intoxication than opiate withdrawal, with 139 (26.3%) unable to list any signs of intoxication compared with 75 (14.2%) unable to list any signs of withdrawal. (Table 21)

Responses, in terms of percentages for each available answer are shown in Tables 17 - 21.

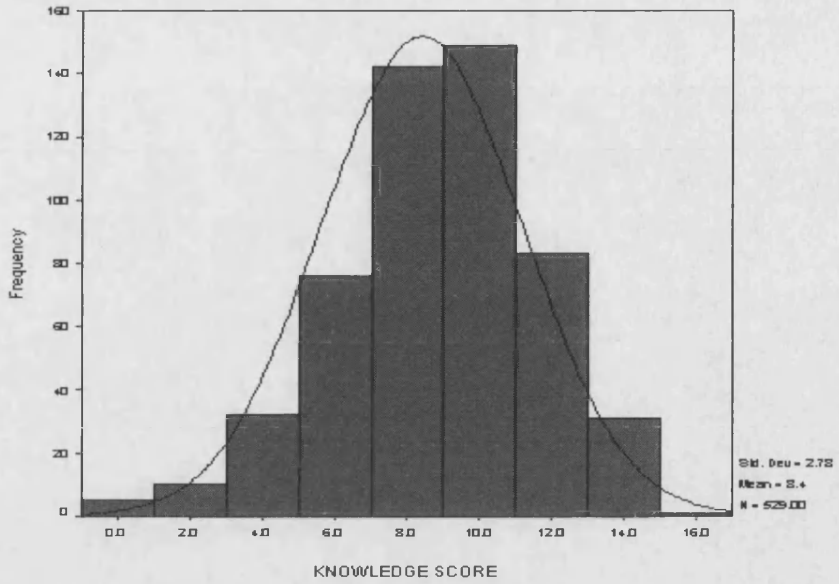


Figure 3: ***Distribution of 'Knowledge scores' for respondents to the full questionnaire***

	True (%)	False (%)	Missing (%)
(a) 5mg of methadone could be fatal to an opioid naïve adult	127 (24.0)	357 (67.5)	45 (8.5)
(b) Taking benzodiazepines with methadone will help with withdrawal	291 (55.0)	200 (37.8)	38 (7.2)
(c) 10mg of methadone could kill a child	487 (92.1)	10 (1.9)	32 (6.0)
(d) Opiate overdose may cause respiratory depression, coma and death	515 (97.4)	0 (0.0)	14 (2.6)

Table 17: ***Answers to 'Knowledge and Training' questions 28 (a-d)***

	1 day (%)	2 days (%)	3 days %)	4 days (%)	5 days (%)	Unsure (%)
How long (days) on average does a person's tolerance to methadone decrease to a point where the original dose may cause toxicity?	4 (0.8)	25 (4.7)	111 (21.0)	24 (4.5)	49 (9.3)	298 (56.3)

Missing values = 14 respondents

Table 18: ***Answers to 'Knowledge and Training' question 29***

	> 30s (%)	30s-1min (%)	1-2 mins (%)	Until dissolved (%)	Unsure (%)
When supervising consumption of Subutex (buprenorphine) how long does it take for the full dose to be absorbed from the mouth?	6 (1.1)	29 (5.5)	113 (21.4)	237 (44.8)	130 (24.6)

Missing values = 14 respondents

Table 19: ***Answers to 'Knowledge and Training' question 30***

	Give out as usual (%)	Refuse to dispense methadone (%)	Tell him to come back when sober (%)	Send him back to his prescriber (%)	Unsure (%)
A drug user arrives at your pharmacy for his daily dose of methadone showing obvious signs of alcohol intoxication. What do you do?	85 (16.1)	76 (14.4)	202 (38.2)	56 (10.6)	93 (17.6)

Missing values = 17 respondents

Table 20: ***Answers to 'Knowledge and Training' question 31***

	No correct signs (%)	1 sign (%)	2 signs (%)	3 signs (%)
33. List three signs of opiate intoxication	139 (26.3)	166 (31.4)	160 (30.2)	64 (12.1)
34. List three signs of opiate withdrawal	75 (14.2)	100 (18.9)	185 (35.0)	169 (31.9)

Table 21: ***Response to 'Knowledge and Training' questions 33-34***

4.1.5.2. Training

Past Training

Overall, of the respondents to the full version of the questionnaire (n=545), 49.9% (n=272, 25 missing) had had training on drug misuse, and 23.4% (n=128, 29 missing) had received training on the prevention of blood borne diseases.

Format of past training

Most respondents who had had training on drug misuse most frequently mentioned the Centre for Pharmacy Postgraduate Education (CPPE) Distance Learning course as the source of their training. (58.8%, n=160) followed by Royal Pharmaceutical Society of Great Britain (RPSGB) local branch meetings. (30.8%, n=84) 15.1% (n=41) of respondents who had had past training on drug misuse reported that they had this as part of their undergraduate pharmacy degree course. The format of drug misuse training reported by the respondents to the full version of the questionnaire is shown in Table 22 below.

	Yes (%)	No (%)	Missing (%)
Undergraduate Course	41 (15.1)	227 (83.4)	4 (1.4)
Postgraduate Training	28 (10.2)	239 (87.8)	5 (1.8)
CPPE Distance Learning	160 (58.8)	106 (38.9)	6 (2.2)
Local Branch Meeting	84 (30.8)	182 (67.0)	6 (2.2)
Other Training	61 (22.4)	205 (75.3)	6 (2.2)

Table 22: ***Format of Drug Misuse Training (n=272)***

Conversely, 48.4% (n=62) of respondents who had had training on the prevention of blood borne disease said that this had been taught as part of their undergraduate degree and only 19.5% (n=25) had undertaken training from the CPPE. The format of training on the prevention of blood borne disease is shown in Table 23 below.

	Yes (%)	No (%)	Missing (%)
Undergraduate Course	62 (48.4)	66 (51.6)	0 (0)
Postgraduate Training	19 (14.8)	109 (85.2)	0 (0)
CPPE Distance Learning	25 (19.5)	103 (80.5)	0 (0)
Local Branch Meeting	17 (13.2)	111 (86.8)	0 (0)
Other Training	35 (27.3)	91 (71.1)	2 (1.6)

Table 23: ***Format of Blood borne Disease Training (n=128)***

Further training

The desire for further training was evident, with 80.4% (n=438, 30 missing) and 76.3% (n=416, 36 missing) of respondents to the full version of the questionnaire stating that they would like further training on the topics of drug misuse and prevention of blood borne disease respectively. Most respondents felt that they would like this training in the form of distance learning packs, 60.5% (n=265, 4 missing) and local workshops, 56.3% (n=247, 5 missing) for drug misuse training. Similarly, most of those desiring more training on the prevention of blood borne disease wanted it in the form of distance learning packages (64.1%, n=267, 19 missing) and local workshops (46.1%, n=192, 21 missing)

Suggestion of topics for future Drug Misuse training

Respondents were asked which topics they would find most useful in a future training session on drug misuse. Suggestions were made by 175 respondents with the majority suggesting that training on the practical issues surrounding providing services to drug misusers would be helpful (60.0%, n=105). Such issues included an understanding of how people 'get into drugs', how much they cost and how treatment programs work. Several respondents wanted to know *'How to provide better services.'* (14.3%, n=25)

4.1.5.3. Statistical Analysis of Knowledge Scores and Demographic Information

Age and Gender

Neither the age group [$p=0.933$] nor gender [$p=0.205$] of the respondents had a significant difference on their scores in the 'Knowledge' section of the

questionnaire. (Measured by one-way ANOVA and independent samples T-Test respectively.)

Years on the Pharmaceutical Register

The number of years that the respondent had been on the Pharmaceutical Register did not have a significant influence on their knowledge score. ($p=0.995$, one-way ANOVA)

4.1.5.4. Statistical Analysis of Knowledge Scores and Service Provision

Selling needles and syringes

The participants score on the knowledge section of the questionnaire did not significantly differ depending on the participants reported needle and syringe selling activity. ($p=0.602$, one-way ANOVA)

Providing a Needle Exchange scheme

The participant's knowledge score significantly differed depending on whether they reported providing or not providing a needle exchange scheme. [Independent samples T-Test, $p=0.000$]

Dispensing methadone to drug misusers

Participants did not differ in their knowledge score depending on whether they dispensed methadone to drug misusers or not. ($p=0.319$, one-way ANOVA)

4.1.6. Part Four – Opinions on Drug Misusers, their Treatment and the Pharmacists' Role (Attitude Scale)

4.1.6.1. Range of Attitude

As expected there was a range of attitude scores of the respondents to the full version of the questionnaire. The average score was 11.3 (max 47.0, min -38.0, SD 12.3. The attitude scores were normally distributed and therefore parametric statistics were used to test the effect of demographics and service provision.

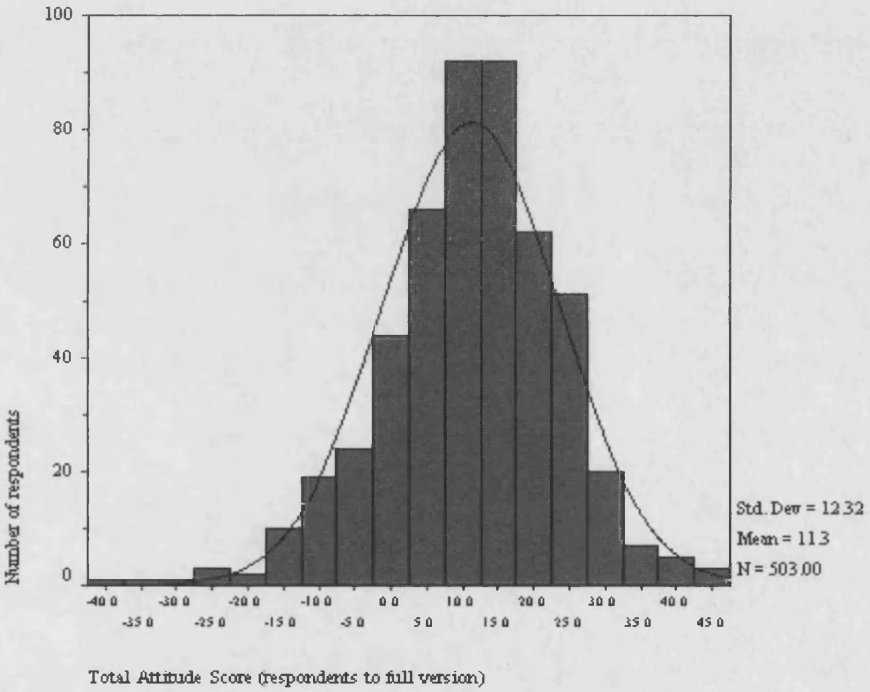


Figure 4: ***Distribution of responses to the attitude scale***

4.1.6.2. Reliability of the Attitude Scale

Reliability of the attitude scale was measured using Cronbach's alpha. The analysis resulted in an alpha score of 0.813, indicating that the scale had good internal consistency that is to say that the statements within the attitude scale correlate highly with one another.

4.1.6.3. Validity of the Attitude Scale

Construct Validity

The tests that follow demonstrate that the attitude statements had good construct validity.

1. Of those providing a supervised methadone consumption service, 90% disagreed with the statement, *'I believe that I would never supervise the consumption of doses of Controlled Drugs by drug misusers on my pharmacy premises'.*

2. Of those providing a needle/ syringe exchange scheme, 68% agreed with the statement, *'I believe the community pharmacy is an appropriate place for a needle exchange scheme'.*

Psychometric Validity

Initial examination of the attitude scale using the Kaiser-Meyer-Olkin (KMO) index of sampling adequacy gave an index score of 0.853. Indexes over 0.6 are required for a robust factor analysis. (Pallant, 2002) Bartlett's test of sphericity was significant with $p<0.0001$ indicating that the data is suitable for factor analysis.

The subsequent factor analysis indicated that there were nine factors with an eigen value over 1, whilst examination of the scree plot suggested that there were five

factors before the change in shape of the curve. It was decided to retain five factors for the subsequent analysis.

The five factors were interpreted as:

1. Attitudes towards providing services to drug misusers.
2. Attitudes towards the supply of needles and syringes and the effect on the community.
3. Attitudes towards providing advice and support.
4. Attitudes towards the treatment of drug misuse.
5. Attitudes towards drug misusers.

		strongly agree No. (%)	agree No. (%)	uncertain No. (%)	disagree No. (%)	strongly disagree No. (%)	missing value No. (%)
39	I believe that prescribing maintenance doses of a Controlled Drug to a drug misuser will improve their quality of life.	103 (19.3)	310 (58.2)	78 (14.6)	27 (5.1)	9 (1.7)	6 (1.1)
40	I believe that providing drug misusers with maintenance dose of Controlled Drugs will stop them using street drugs.	35 (6.6)	147 (27.6)	176 (33.0)	142 (26.6)	28 (5.3)	5 (0.9)
41	I believe drug misusers should only be prescribed Controlled Drugs if they are in reducing doses to help them 'come off' drugs.	98 (18.4)	158 (29.6)	82 (15.4)	158 (29.6)	31 (5.8)	6 (1.1)
42	I believe that providing maintenance doses of Controlled Drugs to drug misusers is a waste of NHS resources.	21 (3.9)	51 (9.6)	86 (16.1)	247 (46.3)	123 (23.1)	5 (0.9)
43	I believe that Controlled Drugs should be dispensed to drug misusers through a central clinic rather than community pharmacies.	63 (11.8)	85 (15.9)	69 (12.9)	201 (37.7)	111 (20.8)	4 (0.8)
44	I believe that community pharmacists have a duty to provide services to drug misusers in order to protect the wider community from the consequences of drug misuse.	90 (16.9)	268 (50.3)	84 (15.8)	66 (12.4)	20 (3.8)	5 (0.9)
45	I believe that providing maintenance doses of Controlled Drugs to drug misusers is part of a pharmacist's professional duty.	89 (16.7)	296 (55.5)	57 (10.7)	70 (13.1)	16 (3.0)	5 (0.9)
46	I believe that my staff would rather not have to deal with drug misusers.	90 (16.9)	182 (34.1)	79 (14.8)	156 (29.3)	22 (4.1)	4 (0.8)
47	I believe that drug misusers visiting my pharmacy endanger the safety of my staff.	31 (5.8)	82 (15.4)	123 (23.1)	245 (46.0)	48 (9.0)	4 (0.8)
48	I believe that drug misusers visiting my premises have a damaging effect on business.	46 (8.6)	107 (20.1)	138 (25.9)	206 (38.6)	32 (6.0)	4 (0.8)
49	I believe that drug misusers who visit my pharmacy are treated by us as 'normal' members of the public.	163 (30.6)	279 (52.3)	45 (8.4)	34 (6.4)	7 (7.3)	5 (0.9)
50	I believe it is a persons' own fault if they become addicted to drugs.	30 (5.6)	106 (19.9)	150 (28.1)	197 (37.0)	43 (8.1)	7 (1.3)

Table 24: ***Response to Attitude Statements (Questions 39-50) (n=333)***

		strongly agree No. (%)	agree No. (%)	uncertain No. (%)	disagree No. (%)	strongly disagree No. (%)	missing value No. (%)
51	I believe that syringes/ needles should only be supplied as part of a needle exchange scheme.	132 (24.8)	236 (44.3)	56 (10.5)	91 (17.1)	13 (2.4)	5 (0.9)
52	I believe that drug addiction is an illness not a vice.	59 (11.1)	229 (43.0)	131 (24.6)	95 (17.8)	15 (2.8)	4 (0.8)
53	I believe that all drug misusers should be encouraged to 'come of' drugs altogether.	159 (29.8)	288 (54.0)	51 (9.6)	23 (4.3)	6 (1.1)	6 (1.1)
54	I believe that selling syringes/ needles encourages illicit drug misuse.	33 (6.2)	116 (21.8)	128 (24.0)	214 (40.2)	36 (6.8)	6 (1.1)
55	I believe that drug misusers are taking some responsibility for their health if they ask to buy syringes/ needles.	43 (8.1)	360 (67.5)	78 (14.6)	38 (7.1)	9 (1.7)	5 (0.9)
56	I believe it is unethical to sell drug misusers' needles or syringes without having a means of disposing of them.	121 (22.7)	277 (52.0)	73 (13.7)	49 (9.2)	6 (1.1)	7 (1.3)
57	I believe the community pharmacy is an appropriate place for a syringe/ needle exchange scheme.	75 (14.1)	237 (44.5)	110 (20.6)	77 (14.4)	31 (5.8)	3 (0.6)
58	I believe that I would never supervise the consumption of doses of Controlled Drugs by drug misusers on my pharmacy premises.	12 (2.3)	16 (3.0)	40 (7.5)	199 (37.3)	263 (49.3)	3 (0.6)
59	I believe supervising consumption of Controlled Drugs by drug misusers on the pharmacy premises is an inappropriate role for the community pharmacist.	37 (6.9)	67 (12.6)	63 (11.8)	184 (34.5)	178 (33.4)	4 (0.8)
60	I believe that supervising the consumption of Controlled Drugs by drug misusers prevents the illicit selling of these drugs on the street.	168 (31.5)	231 (31.5)	51 (9.6)	55 (10.3)	25 (4.7)	3 (0.6)
61	I believe that a drug misuser should have a private area in the pharmacy when (s)he is being supervised consuming a dose of Controlled Drug.	149 (28.0)	290 (54.4)	58 (10.9)	24 (4.5)	7 (1.3)	5 (0.9)

Table 25: ***Response to Attitude Statements (Questions 51-61)***

		strongly agree No. (%)	agree No. (%)	uncertain No. (%)	disagree No. (%)	strongly disagree No. (%)	missing value No. (%)
62	I believe that a drug misusers is embarrassed when they have to consume their dose of a Controlled Drug in front of a member of staff, or whilst other customers are looking on.	64 (12.0)	218 (40.9)	136 (25.5)	103 (19.3)	7 (1.3)	5 (0.9)
63	I believe that a written contract between the pharmacist and drug misusers would help to develop trust between the two individuals.	99 (18.6)	263 (49.3)	105 (19.7)	51 (9.6)	9 (1.7)	6 (1.1)
64	I believe it is appropriate for pharmacists to provide advice (verbal or written) to drug misusers on the management of drug misuse.	67 (12.6)	329 (61.7)	91 (17.1)	33 (6.2)	5 (0.9)	8 (1.5)
65	I believe that I have sufficient knowledge about drug misuse to be able to provide advice to drug misusers on the management of their drug use.	31 (3.9)	114 (21.4)	175 (32.8)	177 (33.2)	39 (7.3)	7 (1.3)
66	I believe that I would never provide advice (verbal or written) on safer injecting to intravenous drug misusers.	37 (6.9)	93 (17.4)	175 (32.8)	173 (32.5)	50 (9.4)	5 (0.9)
67	I believe that it is the responsibility of the pharmacist to provide information on Controlled Drugs used in the treatment of drug misuse to a drug misuser.	46 (8.6)	291 (54.6)	125 (23.5)	60 (11.3)	5 (0.9)	6 (1.1)
68	I believe it is ethical to sell syringes/ needles to drug misusers.	28 (5.3)	232 (43.5)	134 (25.1)	96 (18.0)	37 (6.9)	6 (1.1)
69	I believe that I am adequately supported by the local Primary Care Trust in providing services to drug misusers.	21 (309)	171 (32.1)	191 (35.8)	110 (20.6)	32 (6.0)	8 (1.5)
70	I believe that the reason services are provided for drug misusers is to improve the quality of life of that individual rather that the community as a whole.	21 (3.9)	171 (32.1)	191 (35.8)	110 (20.6)	32 (6.0)	8 (1.5)

Table 26: ***Response to Attitude Statements (Questions 62-70)***

4.1.6.4. Statistical Analysis of Attitude Score and Demographic Information

Age and Gender

A two-way ANOVA was conducted to explore the impact of age and gender on attitude score. Respondents were divided up into three groups according to their age (Group 1: 21-34 years; Group 2: 35-47 years; Group 3: 48 years and above). There was no significant difference in attitude between age groups or gender. There was a significant difference ($p=0.02$) in the effect of age on attitude score for males and females.

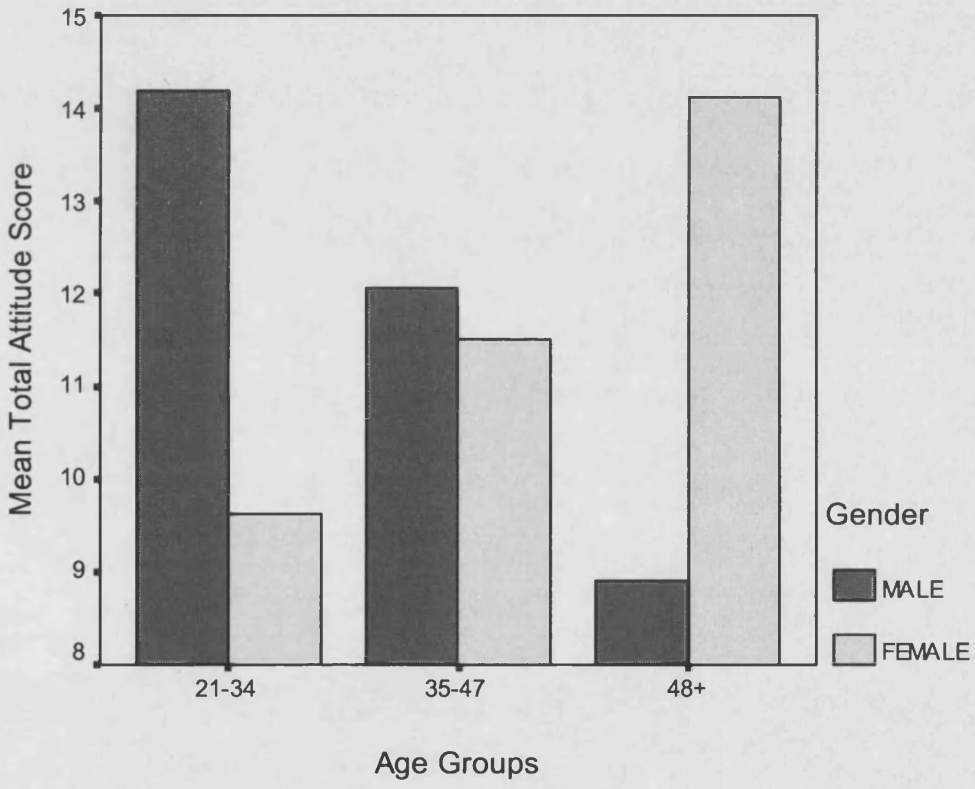


Figure 5: ***Results of two-way ANOVA showing the effect of age group and gender on attitude score***

To further investigate the effect of age on attitude score, a Pearson's correlation co-efficient was calculated. The analysis revealed a small, negative correlation between

age and attitude (r= -0.12, p=0.034) indicating that attitude to drug misusers decreases with age.

Years on the Pharmaceutical Register

A one-way ANOVA was performed to explore the impact of the number of years on the Pharmaceutical Register on respondent's attitude towards drug misusers. The number of years on the register was divided into three groups, 0-9 years, 10-24 years and 25+ years. A significant difference in mean rank score was found between the three groups (p=0.024), with those respondents on the register for 0-9 years ranking higher (mean 12.57, SD 11.79) than those registered between 10-24 years (mean 10.02, SD 12.8) and those registered for more than 25 years (mean 10.86, SD 12.3).

Similarly to the correlation between attitude and age, a small, negative correlation was found between attitude and the number of years that the respondent had been on the Pharmaceutical Register. (Pearson's co-efficient r=-0.094, p=0.039)

Location and Type of Pharmacy Business

A one-way ANOVA indicated that the location of the pharmacy (as previously defined) did not have a significant impact on the respondent's attitude score [p=0.726]. Similarly, there was no significant difference in attitude score depending on the type of business that the respondent worked in [p=0.343] as previously defined.

4.1.6.5. Statistical Analysis of Attitude Scores and Service Provision

Selling Needles and Syringes to suspected drug misusers

A one-way ANOVA revealed that there was a significant difference in attitude score between those respondents who were prepared to sell needles and syringes to suspected drug misusers and currently did; those who were prepared to sell but reported no demand and those who were not prepared to sell [p=0.001] (Table 27).

Prepared to sell needles?		N	Mean	SD
Attitude Score	YES, currently do	103	14.49	11.49
	YES, no demand	156	12.37	11.91
	NO	232	9.30	12.57
	Total	491		

Table 27: ***Attitude score (mean and standard deviation) by willingness to sell needles and syringes***

Providing a Needle Exchange Service

An independent sample T-test revealed a significant difference in attitude score between respondents who reported providing a needle exchange scheme and those who did not. [p=0.000] (Table 28).

Provide Needle Exchange?		N	Mean	SD
Attitude Score	YES	88	15.65	13.26
	NO	385	10.29	12.12
	Total	473		

Table 28: ***Attitude score (mean and standard deviation) by needle exchange provision***

Dispensing methadone to drug misusers

A one-way ANOVA revealed that there was a significant difference in attitude score between those respondents who reported dispensing methadone to drug

misusers, those who reported that they did not do so because there was no demand and those who did not because they were not willing to [p=0.000] (Table 29).

Dispense Methadone?		N	Mean	SD
Attitude Score	YES	359	12.61	11.78
	NO (no demand)	110	9.86	11.36
	NO (not willing)	24	-3.16	16.06
	Total	493		

Table 29: ***Attitude score (mean and standard deviation by methadone dispensing activity***

4.1.6.6. Statistical Analysis of Knowledge Score and Attitude

There was a positive correlation between the participant's attitude (measured by part four of the questionnaire) and their score on the knowledge section (part three). This indicates that participants with higher knowledge scores had a more positive attitude towards drug misusers. (Pearson's rho r=0.167, p=0.000)

4.2. SEMI-STRUCTURED INTERVIEWS WITH COMMUNITY PHARMACISTS

4.2.1. Interpretative Phenomenological Analysis

Thirty-one interviews were conducted by the researcher between September 2004 and January 2005.

Following the 'Theming' stage of the analysis, 108 themes emerged.

The 'Clustering' process resulted in 14 major themes with underlying sub-themes which helped to explain the meaning of the theme. Further clustering resulted in some sub-themes moving between major themes and major themes themselves being clustered. For example the themes of 'Support', 'Teamwork' and 'Communication' were clustered together under the major theme of 'Working with others'. These themes were renamed to reflect the nature of the theme. For example the major theme 'Working with others' was renamed 'Experience of working with others'. This exercise resulted in 9 major themes.

4.2.2. Resulting Themes

Each major theme will be discussed and within each theme some of the constituent sub-themes will be shown in emboldened italics. Narrative extracts are included in order to illustrate the theme and allow explicit understanding of the meaning. Pseudonyms have been used to ensure participant anonymity. Numbers in brackets represent the paragraph number of the transcription in which the quote appears.

4.2.2.1. The pharmacists' perception of their role

Participants described their role in the management of substance misuse in three ways. These were termed **'traditional', 'social' and 'advice giving'.**

a. Traditional Role

The ***'traditional role'*** was described as dispensing and supply of drugs for the treatment of opiate addiction. Some felt that their **only** role was as a supplier of medication. Simon represented the views of these pharmacists when he said *'I think it (our role) is just to supply and make sure that they comply with the prescriber's wishes of daily consumption on the premises or take away'* (5)

b. Social Role

This role was more difficult to define, but was centred on the observation that *'We are the people that will see the client the most out of anybody...'* (Norman, 9). Participants talked about a ***'social role'***, that, because they had regular contact with the client, they were able to build a relationship with them. George summed this up well when he said *'We build up a close relationship with them, we are almost like a mother hen to them!'* (9) he went on to describe how this relationship was perceived to benefit the client, *'I have known a lot of them a long time and they will talk to me. If I turn round and say "you don't look very good today" they are more likely to talk to me than they would to a local GP.'* (21) Other participants also recognised that clients may be more likely to ask advice of their pharmacist because they knew them better.

c. Advice Giving

Pharmacists talked about their ***advice-giving*** role, recognising that they may be the only healthcare professional that a drug misuser is in contact with. Harriet explained by saying *'Essentially there is a point where you can intervene in the course of a drug users' experience with drugs... you are seen as a place where you can start to get better, whether it is through needle exchange or by becoming scripted.'* (7)

Many participants recognised that being ***accessible*** was a major part of their role. Paul said *'I think pharmacy is an ideal place* [for needle exchange] *because there is one on every street corner...'* (63) whilst Adam recognised that *'they don't need appointments, its easy access.'* (50)

In conclusion, participants had varying views on their role and how much weighting the traditional versus social roles had. However, Norman summed this up well when he said *'I think we have a vital role, I think a holistic role. It is not just a case of preparing the methadone and Subutex every day.'* (5)

4.2.2.2. The experience of working with others

This major theme consisted of ***teamwork, support, communication and pharmacy staff*** as sub-themes. These sub-themes represented the 'core' of what was being spoken about in the interviews and for this reason they will be discussed in turn.

a. Teamwork

The participants' experience of working within a team (i.e. prescriber, key worker, pharmacist) was varied. Lottie echoed the experience of many pharmacists

interviewed when she said *'We are not seen as being an integral part of their* [clients] *care.'* (117) Indeed, Kath felt the problem of pharmacists' integration was wider than in the treatment of drug misuse when she said *'I think it comes back to the health services generally, not just working with drug users. Pharmacists aren't seen as part of the NHS team.'* (125) and described how the failure to integrate pharmacists into the drug misuse team had had a negative impact on a client. *'If they had said, well let's try to get to the bottom of what has happened because actually we have got problems, that might be the final straw that* [stopped him getting] *kicked off... but they didn't'.* (93)

Some pharmacists had a different experience. Nigel said *'We work really well as a team and it's quite good because at the moment the shared care team do see pharmacy as an important part'* (129). Those pharmacists who felt that they **were** part of the team talked about the benefits that this brought. Norman said *'It is quite clinically rewarding to be considered part of the team which were are in* [location], *you know, the pharmacist is quite a large part of the drug and alcohol team...and I can't think of another therapeutic area where I have that much clinical influence.'* (51) Some 'integrated' pharmacists also described how being included in the team could benefit the client. Grant said *'I spoke to the GP and recommended that she* [the client] *actually tried to get an appointment with the* [psychiatry] *specialist and that came about and she is on lithium now...I was able to make a difference by actually seeing her every day and having a positive impact on that'* (134)

Some pharmacists also talked about the barriers that prevented pharmacists becoming integrated into the team. Kath described how *'they only want information*

feeding in and they never feed anything out and we have discussed this at the Shared Care Monitoring Group and it's "oh patient confidentiality" and "oh I don't know that we can say that"' (93). Other pharmacists spoke about the lack of two-way information sharing. Ellie summed this up when she said *'More in the loop rather than there's your prescription, I'll see you in a couple of days. Not there's your prescription I'll have a chat to the pharmacist to see how you are getting on and any problems you feed that back to them.'* (237) Some participants suggested how team working and pharmacist integration could be improved, Sandra felt that *'by pharmacy becoming more involved with the NHS, you know electronic linking up to NHSnet, or whatever its called... to be able to send an email to a GP that says you have written this wrong, please send an electronically written script that is acceptable under law... I think the whole system of writing prescriptions and dispensing them needs to be re-thought.'* (87) Harriet said that she *'would like regular meetings with GPs and with practice staff in my opinion as it helps us work better as a team'* (126) she also suggested that a 'model of care' should have a description of *'our* [the pharmacists] *role and how it interlinks with the other professionals.'* (178) and Paul described how he was part of the shared care team and was responsible for developing a contract *'not so much to rein in the drug misusers but actually to make the services work together and support each other really'* (33)

b. Support

This sub-theme refers to the pharmacists' experience of the support that they receive in order to provide services to drug misusers. Again, the experience varied between participants. Unfortunately, most participants felt that support in this area

was lacking. Simon said *'Well, I don't receive any support. The client turns up with their prescription and it is up to me'* (139) and Paul felt the same, saying *'as far as support generally at the moment there is very little in the way of training or, well anything really.'* (99) Nick described an incident whereby the pharmacy had complained to the local drug service that a client had been spitting at pharmacy staff. He said *'we reported it to* [the local drug service] *who immediately got the girl in, stopped her methadone and told her it was us who reported her. Then had the audacity to phone us up and say watch your backs, she will be gunning for you. I don't think that is support.'* (115).

Other participants described 'support' in terms of financial reimbursement for providing supervised methadone whilst some said that there was initial support when the services were originally being set up although this was not maintained in all cases. Vicky explained; *'initially as we set up the needle exchange there was support. Now I think we are just left to manage it, which is fine, but it would be nice to have a review every so often to see how it is going and I mean my experience might be totally different to the experience down the road, so these sort of things make you reassess what you are doing. So, initially there was quite a lot of input, that has gone.'* (97)

A few participants indicated that they did feel supported although these comments were in the minority. Adam said *'certainly the local drugs team are pretty good, um, it is the same as anything, until you have got a problem you never really know how good they are.'* (98) George was more positive about his experience saying

'Within the [local] *group we tend to have [a network] we talk to each other and if there is a problem we can ring each other up.'* (198-200)

Three participants who **were** involved with their respective local drug teams had similar views. An example of this view was demonstrated when Grant said *'I think an issue is that sometimes professionals don't go out and look for the support and look for what's available'* (148). David explained that it was possible to get support, but felt that you had to show your interest; *'You need to make contact so that you can put a name to a face and people know that you are interested and if you need support then they will come and give it to you.'* (113-115).

One participant who works part time for the local DAT felt that individual pharmacists needed to build up individual relationships with the local drug service rather than all the support coming from her. She explained *'I circulated a laminated sheet to pharmacies with my phone number on with basic details about how treatment services work... I want to sort of empower them to build up their relationships with [local drug services] to sort out their own concerns.'* (105)

Participants were asked about the support that they would like. The most common reply was centred on the need for more training in the areas of substance misuse. This said, there was a perception among some participants that there was little money available for this training. *'There is money for training GPs, you know there is money for training everyone but it never filters down to pharmacists.'* (Nigel, 113). The importance of training was a recurring theme within the interviews and will be discussed later in this chapter.

Another pharmacist felt that there should be more 'formal' lines of support for pharmacists involved in treating drug misusers and eluded as to where this support should come from. Bill explained *'there is nothing formal and I think having something formal would be useful. I think the PCT sent out an audit that we were supposed to carry out which I did, but that was years ago and there was no update on the audit etc. so that was a good beginning and that was about all there was.'* (158)

c. Communication

The reported extent of communication between the pharmacist and the prescriber and/ or key workers varied greatly between participants. Many of the pharmacists interviewed felt that there was a lack of two-way communication between the pharmacist and prescriber. Nick said *'They drop in prescriptions, we dispense them...'* (119). Greg explained how this could cause confusion, *'We have just had somebody who was on just a weekend pick-up and they have changed to a daily pick-up and we weren't told about this. We suddenly got a script in the post and didn't know what was going on.'* (161) He went on to explain how better communication with the pharmacist could help the outcome for the client, saying *'The patient's demeanour, how they are looking, if they are looking ill, whether they are loosing weight, all kinds of things like this... it's silly things like this but I think it would be useful information to be fed back.'* (187). Similarly, Tim felt that he was only contacted when the drug and alcohol team had a concern about a client, *'rarely, usually when they are concerned about clients and they want to know about their behaviour.'* (197).

Some participants gave examples of good communication between pharmacists and key workers. Adam described what happens at the start of a client's treatment, *'When you get new patients the key worker will come in and introduce the addict and give them their new script by hand, sort of thing, and certainly that happens around here.'* (102). Sandra explained how working with the DAT has ensured that her 'needs' are met, *'...they call me up and we go through what I want before and then their key worker sets that out.'* (21). She later added, *'Quite often one of the key workers will bring over a correct prescription...'* (25). Maxwell felt that, *'The more information we get, the better, but the key workers will ring us up if they have a problem with a patient or if they are going to change the patient's medication, they will provide us with the prescriptions... and it works extremely well.'* (114). Some participants felt that the feedback they gave about clients was given due thought. Norman said *'from the general welfare point of view, if you ring and say there are problems with this client then it is normally acted upon...'* (13).

Participants had some suggestions as to how communication between pharmacists and prescribers/ key workers could be improved. Lottie simply suggested *'having a point of contact for that key worker...'* (113). Similarly, Kath suggested, '... [the] *key workers name on the prescription.'* (113) One participant talked of having regular conversations with key workers by way of a 'check-up', *I would like a system whereby they* [key workers] *took more interest in the individual client and there was like a three month check-up...with the pharmacist who is supplying the methadone.'* (Nick, 123) Another respondent suggested some form of written feedback, *'... maybe through like a questionnaire that we could post back to them,*

something like a feedback form it doesn't have to take long, a few words but it opens up a whole new window doesn't it?' (Ellie, 209)

d. Pharmacy Staff

Participants talked about their experiences of working with their pharmacy support staff. The majority of participants felt that their staff were 'happy' to provide services to drug misusers. Lottie explained, *'I think they* [pharmacy staff] *see the benefits to the community as a whole because if they are helping to deal with people's drug problems then they can have an impact on crime related to drugs and dirty needles on the street...'*. (19) Another common comment was that pharmacy staff tended to follow the pharmacist's lead. *'I think my staff are fine because I am fine and I think the staff will follow the pharmacist and I think if the pharmacist is positive about it and treats the drug misusers with respect then the staff tend to follow suit.'* (21)

Some participants conceded that some of their staff were not so enthusiastic about providing services to drug misusers. Most of Lottie's staff were comfortable with their role, but *'...others think that it is a complete waste of time and is more of a hassle than it is worth.'* (15) She went on to explain why she though this was *'...they tend to focus on the bad things that have happened in the past and a small minority of people have shop lifted and caused various other problems in the shop and they always tend to focus on those issues... they can't seem to see past that.'* (27).

Most participants felt that staff unease about drug misusers was because of concerns about their own personal safety. *'...well if there is trouble in the shop the staff get a bit concerned about it...I mean if we get real problems then we will pull the plug on it [the prescription] and I will talk to the drug team and they would stop it. But the safety of the staff would come first in spite of our goodwill.'* (Malcolm, 25)

One participant registered concern about a member of staff who lived close by the pharmacy, saying, *'I must always remember that they live in the local area, so they live amongst them* [the clients]*...I also have to bear in mind that I drive home at night but they are all walking past a particular member of staff's house and I am concerned about that.'* (Kath, 21)

In spite of some participants expressing staff concerns about providing drug misuse services, this comment from George represents a common theme in the interviews. *'I think initially there was a certain amount of resentment. I think the more we do and the more they see results, they see people clean their act up, the more they are getting quite happy with it.'* (29)

4.2.2.3. Legal and ethical considerations

The ***legislation*** surrounding Controlled Drugs was a major topic of the interviews. Participants were divided about how the Misuse of Drugs Act affected their work with drug misusing clients. Simon represented the views of some participants when he said *'...the law is the law and I will not dispense anything unless it is correct, in spite of knowing that the thing is genuine.'* (70)

Other pharmacists were more pragmatic, Maxwell felt that, *'There has to be a certain amount of flexibility within that because pragmatically, if you are dealing with someone on a Friday night and there is no opportunity of actually receiving that prescription until Monday morning and they need their methadone then one has to be flexible... however we have to be very careful not to break the law and not to abuse the situation that we find ourselves in.'* (87)

In one instance a participant received a letter from the Statutory Committee of the Royal Pharmaceutical Society after he had dispensed methadone from a faxed prescription. He explained *'I dispensed a fax prescription knowing full well that it was going to come the next day. It wasn't the client's fault we had messed up...we should be able to, if we know that it has come from the prescriber, it is in his writing.* (George, 235) He added later, *'I had to acknowledge that I had received a letter and I wouldn't do it again. To me it was undermining our professional judgement.'* (247).

A number of participants felt that incorrect prescriptions for Controlled Drugs had a negative impact on the client, *'That's probably the most nuisance because it is not the patient's fault, it is not my fault... but I can't do anything about it and if I have got to send somebody, who has already travelled 20 miles to my pharmacy because he likes to come here, back because the doctor's written it wrong and they often don't have easy transport, possibly because of poverty issues involved with their habit, then it makes me feel bad that I can't give them good service...'* (Sandra, 83) and many felt that *'... the doctors who should know how to write a prescription* [are] *not doing it correctly.'* (Bill, 128)

The ***ethical*** considerations discussed by participants were centred on client confidentiality. Confidentiality was seen, by some, as a barrier to information sharing about a client. Harriet explained *'When I speak to a key worker, if I specifically ask some questions I know they will only tell me some of the information, they won't necessarily tell me, some, will, but most of them won't tell me if there is something else in the offing for that client. You discover it later on and on odd occasions I have been told – that's because I didn't need to know it, so I have to assume that it is confidentiality.'* (148)

Similarly, George felt he had a duty of confidentiality to his clients, saying *'It depends what the information is; normally nothing and I may counsel or talk to them. Most of it is confidential, but if it is bad enough then, yes, I might have an off the record conversation.'* (25)

Simon raised a concern about the lack of confidential information sharing, saying, *'I think if I am going to be dealing with them on a daily basis, and my staff, then I think we should be given some information if they are HIV positive or anything.'* (66)

Participants differed in the amount of confidential information that they wanted about the client. Some felt they needed very little, *'Not a lot, but I don't think we need a lot...'* (Greg, 161) He went on to say *'...what is happening and as much information as they can provide without jeopardising confidentiality. We don't want to be nosy but it's just nice to be kept informed...'* (173) others felt that they needed

more information about the client in order that they could provide better support, Maxwell explained, *'I would like to know a little more about their background; where they have come from. Again, that is confidential information but if they have been on the scheme for some time and they have moved from another area I would like to know that. I would like to know their medical history; I would like to know their social background as well, so that we can give greater support.'* (75)

4.2.2.4. The importance of training

Comments about the availability of training differed. For example, Tim said *'Training? I haven't had any and wasn't aware if there is any.'* (133) whilst in another area the experience was different, *'Everyone gets invited,* [to training sessions] *whether people go or not is up to them.'* (George, 176)

The importance that participants linked to training sessions was evident, George commented on the chance to network, *'...the chance to talk to people who are doing the same thing.'* (196) He also commented on how his training had improved their service to clients, saying, *'... we have even been taught, instead of using heroin we use Nescafe, but how to actually draw the syringe up to the filter... you could actually tell them how to inject more safely...'* (184) Greg, who had completed the Royal College of General Practitioners Certificate in the Management of Drug Misuse said that, *'It changed my opinions on drug treatment, like detox was the only goal and now maintenance is quite acceptable...it was the evidence that was produced. The NTORS study and so on.'* (118-120)

Some participants felt that some of their colleagues would benefit from training in the area of drug misuse. Nigel commented, *'I think an awful lot of pedantic pharmacists would learn a lot about not making life awkward for themselves.'* (121).

Participants spoke about the difficulty in attending training, for example, Kath said *'pharmacists are really busy people; there is a limit to the number of times you can call them out for an evening meeting...'* (105)

The cost of training was also mentioned by a number of participants, *'If you wanted 30 pharmacists to turn up for a training day somewhere, the whole issue of funding locum cover for an away day.'* (Nigel, 117)

Despite the difficulties in attending training sessions that were mentioned, the majority of participants agreed that further training in the subject was important to them. They had a wide range of opinions as to what the training sessions should consist of; George suggested *'Anything and everything I think!'* (178) a summary of the training needs identified by the participants is shown below.

'How they get into the problem'	'Use of pump dispensers'
'How to inject safely'	'Cost of street drugs'
'Street terminology'	'How much do people use?'
'Why are people on maintenance?'	'Who is the prescriber?'
'Needle exchange – best practices'	'How to handle conflict'
'Up to date procedures'	'What goes on at a drug clinic?

Figure 6: ***Summary of Pharmacist Interviewees Training Suggestions***

4.2.2.5. The importance of job satisfaction

Participants were asked what the positive aspects were in providing services to drug misusers. Factors supporting a feeling of job satisfaction could broadly be divided into intrinsic and extrinsic.

a. Positive Change

Most participants commented on seeing a ***positive change*** in the clients and many felt that this experience encouraged them to carry on. For example, Harriet said *'It's very encouraging when someone comes back and says I've been clean for two years, or I am walking around in town and someone taps me on the shoulder and says 'do you remember me from five years ago?''* (110) Ellie felt the same, saying *'you see them walking around and they are clean shaven and they are building relationships with people and they are in the park with their kids, it's probably something they would not have done 5 or 10 years ago, that's brilliant, really good!'* (193)

Other participants talked about seeing clients reduce their dose of methadone as a positive aspect of their role, *'when the dose gets reduced, they see it as an improvement and then they* [the staff] *are happy.'* (Simon, 127) Client 'gratitude' was mentioned as a positive aspect of providing drug misuse services, *'I have had several addicts...who on leaving have said that they really appreciated the fact that I treated them like another patient as opposed to a drug addict. And that is quite rewarding when that happens.'* (Sandra, 150)

b. Feeling Valued

Another intrinsic aspect of job satisfaction was the feeling that the participants were ***valued*** for their role in the treatment of drug misuse. Participants had mixed views on whether or not they were valued. Bill said, *'In my experience I would like to think I am valued by the users, I would be disappointed if I wasn't and I think I am valued certainly by some of the prescribers and the nurse I was mentioning as well. She often phones for advice and I have become valued by her.'* (166) Sandra felt differently, saying; *'Um, no. I think it is probably getting better. I think it is one of those things we get patted on the back for when it is politically correct to pat us on the back for it, but when it comes to well if you value us this much are you going to pay us to do it at a reasonable level it is oh...'* (151). David expanded on why he felt that pharmacists were not valued, *'...because it is inherent to this profession. Pharmacists have been fulfilling a social role for free and they are expected to do that for ever because they are the first point of contact with the community...people expect you to deal with it and therefore that's why they don't value it.'* (123)

c. Financial

The major extrinsic contributor to participants' job satisfaction was the financial benefit of providing drug misuse services. Graham admitted, *'Well it is financial, you know I am afraid we are all in business and we are paid for doing the work.'* (121) Getting paid an appropriate amount was also important, *'there is an issue about how much you are paid and whether you can really afford to run the service.'* (Harriet, 34)

Intrinsic aspects of the participants' job satisfaction were centred on the feeling that they were helping, *'Well, feeling that we are helping...as a national problem,*

community problem and because they are local people and we want to help local people as well.' (Malcolm, 117)

d. Anti-social behaviour

A factor that had a negative impact of the participants' job satisfaction was when they experienced antisocial behaviour from the clients in their care, for example, *'...there are instances when I have had people shoplift in my shop and I have trusted them and have taken people back on occasions when they have promised they will never do it again and I have had my trust thrown back in my face and you just think why do I bother?'* (Lottie, 97)

4.2.2.6. The experience of providing services to drug misusers

Participants talked of their experiences in providing drug misuse services such as ***selling injecting equipment*** and ***pharmacy based needle exchange***. They also discussed their views and experiences of ***dispensing controlled drugs*** for the treatment of drug misuse and ***supervising consumption*** of controlled drugs.

a. Selling injecting equipment

Not all participants were happy to sell injecting equipment to heroin users. Those who did most commonly cited 'harm reduction' as the justification for doing so. *'Mainly to stop them sharing or using dirty needles, that is the main reason.'* (Simon, 84) Other participants had reservations about selling injecting equipment, Bill explained, *'I have done in the past* [sell injecting equipment]*...I am not sure*

whether it is still frowned upon, which is something to do with it, but that in itself does not put me off, but it is the same sort of thing in that I know that none of the good pharmacies in town sell needles, so if a pharmacy near you starts, in the same way as if a needle exchange starts in town you will be absolutely inundated, and that in itself is enough to put me off,' (76) Several participants spoke about the lack of control when selling needles and this was a reason for not wanting to sell them. *'If I am providing needles I want it to be in a controlled way, whereas the needle exchange service; if somebody came in I didn't know and wanted needles we would be quite happy to provide a pack... so that would be my way of supplying it. I wouldn't want to get involved in selling.'* (Vicky, 59) Several participants did not sell injecting equipment were worried about how used works were being disposed of. Tim explained, *'We used to do that [*sell injecting equipment], *we stopped doing that, partly because we had a huge demand for it, mainly because we were finding used syringes thrown in the street around behind the shop.'* (45). One participant referred to the RPSBG guidelines on the sale of injecting equipment, saying *'...the pharmacist of course refers to guidelines that say you shouldn't supply them unless you have facilities for disposal.'* (Kath, 44)

b. Pharmacy Based Needle Exchange

Participants' experiences of needle exchange were either positive or negative in nature. Most participants who provided the service felt that community pharmacy was an appropriate location for the service because of the ease of access for would be clients. Indeed, George went as far as saying *'I think in an estate like this it is the only place for it...'* (56) Grant said that pharmacies were an appropriate place for needle exchange, *'...for the simple reason that the supply of methadone and*

Subutex is done in the pharmacy. It is regarded by clients as a place where they can go, it is a great place for harm reduction.' (74) Norman represented the views of some participants with his concern about public perception of the scheme, saying, *'It is sometimes difficult to balance a mother asking you questions about her young child when somebody wants a pack of needles. Not because it is not the right place to do it, it is the public perception of whether or not it is the right place to do it.'* (27).

Malcolm felt that needle exchange supplemented the advisory role of the pharmacist and that this encounter with a client could be used to offer advice and support. *'...types of treatment, up to date types of treatment, what equipment can be supplied, types of administration, you know... Hep C risk, that kind of thing.'* (181)

Negative comments about needle exchange were mainly around the number of needles returned to the pharmacy. Greg summed up the view of many participants when he said, *'I like the idea of needle exchange; unfortunately it tends to get as a needles going out scheme and I don't think enough are returned...'* (59) Lottie was more pragmatic, *'...we have a duty both to the patient and the community to make sure that they do safely dispose of any needles that we provide to them, um, but I think there also needs to be some degree of flexibility within that service as at the end of the day we are looking at a harm reduction service and it is important that they use clean needles and I think that somebody who repeatedly doesn't bring back dirty needles then I think I would probably have an issue with that.'* (51) Incorrect disposal of used syringes was seen by some as a source of conflict between the pharmacy and the general public. *'We get a little bit of alienation from some of the*

customers, some of the locals, because when they [needle exchange clients] don't bring one back and when they find needles in playgrounds.' (George, 56) Previous 'bad' experiences with poorly run needle exchange schemes can put pharmacists off providing the service. Kath explained, *'...I tried to persuade a pharmacist to become a needle exchange outlet recently and [they] had very bad experiences from a badly run needle exchange somewhere else in the country and it wasn't exchange...it was badly run and no needles were coming back and staff had been threatened and so I think that is a huge barrier.'* (49)

Lack of funding to provide needle exchange was seen as a barrier by some participants to participating in the scheme. One participant did not know of any needle exchange pharmacies in his town. He said, *'my main concern at the moment is funding... there isn't any, and what little there is, is inadequate...they have asked for volunteers but there was no funding so we wouldn't do it.'* (Bill, 54-66) Bill also voiced a concern about potentially being the only needle exchange pharmacy in his location. He explained, *'...if you have one pharmacy in the area that does it then you are absolutely inundated. I think that if all pharmacies did it then everybody would have a little bit of people coming in and it wouldn't be a tidal wave... you have less of an opportunity to sit down and have a chat with them...'* (52)

Several participants who provided needle exchange voiced a concern abut paying for hepatitis B vaccination for staff involved in running the scheme. Harriet was quite clear with her view, saying, *'If pharmacies are doing needle exchange, the PCT should stump up for the Hep B vaccination. That is my viewpoint.'* (168). Some participants talked about the 'risks' associated with providing needle

exchange. Most agreed that the risk of needle stick injury was theoretical, and could be minimised by following a set protocol for handling returns, however, in one pharmacy a purpose built facility had been built to handle needle exchange. *'The girls don't want to do it, but they won't be involved because it will be out the back in our new facility.'* (Nick, 53)

c. Dispensing Controlled Drugs

Participants had varying views about the use of opiate substitutes to treat heroin dependence. Some had read the available evidence; *'... from the studies that have been* Most felt that it was an appropriate way to tackle the problem, Nigel said, *'I don't have a problem with it... Alcohol, I mean, what's the difference. People will still drink regularly; it's the same thing. It's just that alcohol is legal, drug abuse is illegal and if it keeps peoples lifestyle stable so they can look after their families, hold down a job or whatever then I don't have a problem with it.'*

'Keeping people stable' was a common reason given by participants for the use of drugs such as methadone and buprenorphine. Some participants commented on the doses being used. *'I think the highest I think we have had is 180ml a day for a girl who was about two stone wet through. But she has come back down and I think is on about 50ml now. It does work, it takes time but it works.'* (George, 134) Others were concerned about the low doses that they saw on prescriptions, *'...it is frustrating that you see people on 30ml and OK, I know if you present to a doctor for the first time they are not going to wham you on 60 or 70mls but...'* (Ellie, 125)

Several participants commented about the numbers of clients who had successfully detoxed from methadone, *'In all the years I have seen quite a few methadone*

addicts, not a single one has actually kicked the habit.' (Simon, 96) whilst Norman's experience was different, *'...we normally have one or two a year who come off prescriptions altogether and people say to me, well that's not many, but I think when we consider the lifetime experience and the lifetime it has take, a – for people to start and ask for help and then b – to break their own habits, you know two a year is pretty remarkable to be honest.'* (71)

Participants commented on maintenance prescribing, for example, Bill said, *'I think that there are obviously some people who are going to be addicted for the rest of their lives and I think that giving them a maintenance dose, if that is going to stop them using street heroin or is going to stop them stealing to try to fund their addiction, then I think it is the right thing to do.'* (120) whilst David said *'I have gone through a phase where you see people day after day and you never see them going down. You just wonder what is happening really...'* (77)

d. <u>supervising consumption</u>

Most of the participants who supervised the consumption of controlled drugs by clients felt that it was a good idea, for example, *'I think the majority of it should be supervised so that we know the patient is getting the correct dose and that they actually consume the dose themselves.* (Bill, 5) and *'I think it gives the treatment services confidence to work with the volumes that are necessary for some people.'* (Kath, 137) However, Malcolm was concerned about the clients' privacy and dignity, saying *'I feel uncomfortable for them, you know, so I don't think it is the right place to do it.'* (105) and Grant admitted, *'We don't have the best facilities for doing supervised but we are actually not adapting the premises because we are*

moving into a surgery and we are going to have a counselling area for supervision.' (78)

Payment and training for supervised consumption were discussed by some participants. One had heard that some PCTs require their pharmacists to be accredited in order to be able to supervise consumption. He explained, *'...to get accreditation you have got to do certain training courses but I don't know anything about it, but it sounds like it must be better than what is going on here.* (Bill, 162). Tim voiced concern about the method of paying pharmacists for supervised consumption in his area, *'I haven't seen a form for about a year or so and when you phone up they say, oh we posted* [it] *to you, you can't have another. That's it until the next quarter.'* (165)

Most participants who were involved in supervising Subutex had concerns about the process. *'We have a policy of three minutes, so yeah, they have to hang around but then again that is another issue isn't it? What is supervision? There are a lot of issues involving supervision of Subutex. I routinely check the patient's mouth before they leave...there are ways around it. So there is no 100% way to supervise Subutex effectively.'* (Grant, 87). Similarly, Ellie said, *'It goes under the tongue and they sit or they stand and talk to me... I never really know and there isn't really any guidelines like methadone...'* (157)

The use of 'contracts' with supervised clients was discussed by participants. Most participants were familiar with the use of contracts, but the perceived benefits of such a document were varied. For example, Ellie felt that contracts were *'...a good*

icebreaker...it is nice on their first time to go through it, this is what I expect from you and what you can expect from me.' (33) Norman felt that contracts *'make everybody realise that they should all be working to the same goal, which is in the client's best interests really and their overall health.'* (17) Others felt that they were useful to reinforce the consequences of unacceptable behaviour, *'They work to some degree and to give the addicts the knowledge that we are not going to take any old crap from them basically.'* (Adam, 46) However, Tim felt that *'the contracts were introduced more to appease the staff than anything, to keep the staff happy and say you know we have got it in writing. Once those staff had gone we didn't feel the need for a contract.'* (33)

Some participants felt that the contract was no substitute for establishing a rapport with the client. Kath explained, *'I tend to think it is a bit of paper that is going to get lost, basically. I think it is much better when someone comes in, I would say, oh, you haven't been to us before, can I just tell you a bit about us...I find to sort of say that and make eye contact with people, I find that works much better than a contract.'* (25)

4.2.2.7. The impact on clients and customers

Most participants were clear about the perceived benefits of services such as supervised consumption and needle exchange on *the clients* who used the services. They also made comments about the impact of these services on other customers of their pharmacy.

a. <u>the clients</u>

The perceived benefit to the client was linked to the regularity with which the client visited the pharmacy (daily in many cases) Grant said, *'...my experience is that they will always ask the pharmacist, always ask me anyway, but again I think it depends on what their relationship is like with their pharmacist...'* (15), similarly Lottie said, *'If you build a good relationship with them, they can ask you for advice and information about things and perhaps it makes them feel more part of the community then if they were just being dealt with elsewhere.'* (81)

Most participants spoke about how they *'are another patient...'* (Sandra, 150), she went on to say how *'just treating them normally they really appreciate that and it makes me think that this is the right way forward for me.'* (150) Almost all the participants spoke about how the clients were able to ask for advice about their health, for example, *'We have certainly been approached by many of the drug addicts for skin infections...people* [have] *presented with DVTs or that sort of thing; infected injection sites where they have popped a vein and stuff like that, so they will do that quite often.'* (13) and most participants felt that they were appreciated by the clients, *'...to them it's very valuable and we get those comments on a frequent basis that they appreciate the service and if it disappeared they would certainly miss it.'* (Maxwell, 102)

However, some participants described the frustrations of working with this group of clients, for example, *'We are really pleasant to our addicts I must admit, they will tell you our Nick is the lad, he's a good boy, Nick is alright, he will look after you...and then they will nick something!'* (29)

b. other pharmacy customers

Participants discussed how providing drug misuse services affected other pharmacy customers. Some did not think that the other customers knew what was going on, for example when a drug user came in for a needle exchange pack. *'We try to do it in a way so that it is not obvious what is going on. I mean some people will know, but I have never had any adverse comments.'* (Malcolm, 109) Other participants dealt with customers concerns about needle exchange by explaining why they provided the service, *'...whenever we have anybody that comes in complaining about, oh, you are giving needles to drug addicts free... we do try to discuss with that person that it is definitely best for society and it cuts down on health costs in the long term if these people have clean syringes.'* (33)

Some participants felt that other customers were curious about drug misuse services. *'...some people think they know, oh, it's a methadone user and they try to make their own comments about what they have read and just to show off a bit that they know what is going on...'* (David, 89) *'...if they ask about it then obviously we don't give any confidences away but we might say to them that these people have a problem in order to help them.'* (Maxwell, 47)

Participants commented on the problem of intoxicated clients attending the pharmacy, Norman said, *'He was obviously a bit out of his tree and we had quite a large shop full of people and one mum said to me, gosh, I don't think I am going to bring my child in here again if you have got that sort of person here...'* (31)

4.2.2.8. Perceived facilitators and barriers to developing Pharmacy Services for Drug Misusers

This theme arose from the transcripts of the interviews. It refers to comments, views or experiences related by the interview participants that the researcher regarded as important facilitators or potential barriers to the development of pharmacy based drug misuse services.

a. Facilitators

Attendance on training courses allowed participants to network as well as understand more about drug culture. It was recognised that this type of training may benefit those pharmacists with a negative attitude towards drug misusers. One participant who had attended a training session run by the local drug service said, *'I would recommend it to anybody, and it was quite good because* [the organiser] *actually said, "Well it shouldn't be you lot coming, it should be the pharmacies where they are abusive towards addicts..."'* (Nigel, 21)

Recognising teamwork was seen by one participant as being an important facilitator in the development of pharmacy services, he explained, *'...having some sort of contract which recognises that everyone is equal and give some communication mechanism... recognising that everybody is in the team and it is a team work thing is certainly one key thing in terms of a successful model.'* (Paul, 117)

The new pharmacy contract was seen as a means of helping pharmacists integrate into the NHS team, as Kath explained, *'...pharmacists aren't fully seen as part of the NHS team. Hopefully with the new pharmacy contract they will be.'* (125)

b. Barriers

Grant commented on the attitude of some of his colleagues, *'I do get frustrated with pharmacists sometimes, especially when I go to local meetings and very respected pharmacists have such negative attitudes towards everything related to pharmacy... when I talked to a few key workers* [at the local drug service] *sometimes you get negative comments about the attitude of some pharmacists.'* (152) The attitude of pharmacy staff was also commented on, *'nowadays more and more the girls and the ladies say to me why do we bother... they are very cynical about the whole thing because of the behavioural problems.'* (Nick, 29)

Some participants were concerned about the effect that providing drug misuse services might have on their business. Nick was very clear on his view, saying, *'I honestly think that whatever we get paid we suffer as a result of the public's attitude to us, especially in a shop like this has got a lot of them, the 'druggie ones'. You know, that is the druggies' chemist shop – we won't go in there.'* (Nick, 77)

Lack of training and a wider understanding of the drug problem was seen as an issue by one participant, *'...for a pharmacist who doesn't actually want to know more about what's going on behind the scene, behind the treatment... I can understand that they might say, well it's useless, because they don't see* [anything] *apart from handing something over to a drug addict every day, they don't have a wider understanding of the situation.'* (David, 93)

Some participants felt that some prescribers lacked understanding of the pharmacists' role. *'...from my training with GP's, every meeting I have done there have been some basic and what I consider questions that you wouldn't dream of asking what a pharmacist actually does. Until you actually tell them what you do they don't really understand... they imagine you can dispense a controlled drug against a faxed prescription or word of mouth. They don't really understand the consequences of that for the client or of actually being seen to provide a good service for the client.'* (Harriet, 170-174)

As has been described in a previous section (4.2.2.3) the sharing of confidential client information was regarded by some participants as an important issue. It was viewed as a potential barrier to two-way communication between the pharmacists and key worker/ prescriber.

4.2.2.9. Views on the content of a Pharmacy Model of Care

At the end of the interview, participants were asked to reflect on what they thought should form a Community Pharmacy Model of Care for Drug Misusers.

a. Guidelines

Most participants mentioned the need for guidelines on the dispensing and supervision of Controlled Drugs used to treat addiction, and the need for a gold standard, *'Methadone and Subutex; there should be a protocol for supervision... there should be model standard operating procedures...'* (Grant, 169), *'...a service specification for supervised consumption... I think that will be the ideal gold standard...'* (Kath, 133)

b. Teamwork

The majority of participants talked about the need for recognising teamwork, and including community pharmacists as part of the team. David explained, *'I would start with the clinic and the pharmacy's interest in being part of it, you know, have a meeting together to agree a form of protocol so that everybody knows what they are doing, what their roles are and who to contact if there is a problem...there also needs to be a review like we do here every year where GPs, the clinic and the pharmacists meet together and share their experiences.'* (131) Similarly Paul felt there needed to be *'...some sort of contract which recognises that every one is equal and give some communication mechanism...recognising that everybody is in the team...'* (117) Several participants who had previously mentioned concerns about the two way exchange of confidential information between key workers/prescribers and pharmacists felt that this needed to be addressed; *'confidentiality issues should be outline...'* (Maxwell, 131)

c. Training

Several participants talked about standardising the training required to provide drug misuse services, for example, Bill said, *'I think it should contain some sort of suggestion or formalisation for the training of pharmacists so that pharmacists are not just trained on filling in the forms to claim the money for supervised consumption but how to handle difficult situations in aggressive patients etc. I think that is really important if we want all pharmacists to take this on board...'* (184)

Other participants talked about the need for evidence based information, Ellie agreed, saying, *'...definitely, it's very important* [evidence based information] *I think, because you do get some pharmacists who won't touch it unless it has got a backing to it.'* (253)

A summary of the interview participant's suggestions for the Model of Care is shown below.

Guidelines
Supervised consumption – methadone/ Subutex
Needle exchange
Standard Operating Procedures – Gold Standard
Sharing of client confidential information
Audits

Team Work
Role clarification
Lines of communication
Information sharing
Contracts
Multidisciplinary meetings

Training
Pharmacists' role
Evidence behind treatment
Best practices – the guidelines
Dealing with conflict

Figure 7: ***Pharmacist Interviewees Suggestions for a Pharmacy Model of Care***

4.2.3. Summary of Themes and Sub-themes

Theme	**Pharmacists Perception of their Role**	**Experience of Working with Others**	**Legal and Ethical considerations**	**Importance of Training**	**Importance of Job Satisfaction**
Sub-themes	1. Traditional 2. Social 3. Advice Giving	1. Teamwork 2. Support 3. Communication 4. Pharmacy Staff			1. Positive Change 2. Feeling Valued 3. Financial 4. Antisocial behaviour
Theme	**Experience of Providing Services**	**Impact on clients and customers**	**Perceived Facilitators and Barriers to developing services**	**Views on the Content of a Pharmacy Model of Care**	
Sub-themes	1. Selling injecting equipment 2. Needle Exchange 3. Dispensing Controlled drugs 4. Supervising Consumption	1. Clients 2. Other pharmacy customers	1. Facilitators 2. Barriers	1. Guidelines 2. Teamwork 3. Training	

Table 30: ***Summary of Themes and Sub-themes of the Pharmacist Interviews***

4.3. SEMI-STRUCTURED INTERVIEWS WITH SERVICE USERS

4.3.1. Interpretative Phenomenological Analysis

Fourteen interviews were conducted with drug misusing service users of community pharmacies by the researcher between February and March 2006.

Following the Theming stage of the analysis, 209 themes emerged.

The Clustering process resulted in 13 major themes which were further reduced to 6 final themes each with underlying 'sub-themes' which helped to explain the meaning of the theme.

4.3.2. Resulting Themes

Each major theme will be discussed, and within each theme some of the constituent sub-themes will be shown in emboldened italics. Narrative extracts are included where it is felt that the extracts represent the reports of the participants experience and to illustrate the theme to allow explicit understanding of the meaning. As with the pharmacists' interviews, pseudonyms have been used to ensure participant anonymity. Numbers in brackets represent the paragraph number of the transcription in which the quote appears.

4.3.2.1. The effect of past experience on the attitude of service users

The majority of the interview participants described past experiences of receiving drug misuse services from community pharmacy. So called ***extrinsic*** factors included being kept waiting for services, Sam described how this made her feel,

'...they kept serving people in front of me. I wasn't in a proper queue so I stood in front of the counter and she was serving people behind me and that annoyed me quite a bit because I had been stood there for about 10 minutes.' (9). Other participants described how they were asked to come back for needle exchange because the pharmacist was at lunch, '[They won't give you needles?], *not unless the pharmacist is there. It's got nothing to do with giving out methadone, it's needles, the pharmacist has got to be there. I don't know why!'* (Helen, 15-17)

Participants described how some pharmacies had stopped providing needle exchange services. *'...they are really stuck up and they don't want to know because there are some pharmacies around that don't do it because I think junkies were stealing in the shop.'* (Helen, 67). Others went on to describe how reducing the availability of needle exchange affected them. *'If they haven't got a needle exchange and you don't belong to it or whatever, or not registered with it then basically you are screwed. You can't do nothing.'* (Adam, 89). Kate explained why a local needle exchange is vital, *'...not being funny, if you're sick and want a bit of gear you just want to get those pins and get the gear in you to stop yourself from being ill, so you will go to the nearest place you know.'* (37)

Pharmacy opening hours were discussed by some participants. Most commented favourably on opening hours, however, the issue of early closing on Saturday was brought up by more than one participant. Helen said, *'I find it unusual shutting at mid-day on Saturday, shutting for lunch, I find it the dark ages!'* (91)

Intrinsic factors are described as how an individual is made to feel by the experience of using a pharmacy for drug misuse services. These factors were almost always negative in nature. For example, Michelle described how she felt about getting methadone from her local pharmacy. *'When I first got a prescription to come in here I was very embarrassed; I was because although I used it for prescriptions from the doctors for other stuff, I was embarrassed because I sort of knew them then, only sort of slightly knew them and I thought they would judge me.'* (5)

Another participant described being frightened by local children's comments, *'...there are lots of kids that hang around outside and they call you dirty junkie and crack head, honestly they do...I was frightened to come down here some days...it is upsetting when you get called names.'* (Kate, 169).

The attitude of pharmacy staff had an impact on how the participant felt. For example, Kate said, *'The staff in here are very nice, after my experiences from other places...they can be a bit, you know some people can be a bit like, 'oh don't come near you, you've got AIDS' or something.'* (207)

4.3.2.2. Experience of current pharmacy services and perception of the pharmacists' role

Participants described their experiences of ***needle exchange, supervised methadone consumption*** and ***advice giving.*** These were associated with positive and negative experiences.

a. Needle Exchange

Positive experiences were generally associated with the availability of needles and syringes; that is that the service was available locally. The problems associated with the lack of availability in certain areas have been described above. However, where needle exchange services were available, they were appreciated. *'I think it has been absolutely brilliant. I have used needle exchange and there has never been a problem with collecting needles even if I haven't brought back a used one...'* (Marcus, 5) One participant described how the pharmacy staff put the needles in a bag in order to conceal them. *'...they try to put your needles and what they come in, in a bag for you.'* (John, 25)

Negative experiences of needle exchange services were associated with lack of availability of injecting equipment and paraphernalia. Adam described how he managed when he could not get hold of clean equipment. *'I keep it* [cin bin] *under my bed and my girlfriend's got her own as well so if there was a problem and we couldn't get any, I know I can go back into that bin and find some...and I know I can use that one again maybe. I'd rather not, I'd rather use a new one altogether, but sometimes it and cause a problem and I don't think they understand.'* (162) He also described the desperation felt by some individuals who cannot get clean injecting equipment. *'I knew this one guy...he used to walk around, it was the weekend and nothing was open, he used to walk around this warehouse where everybody used to have hits and he used to look for old syringes on the floor...'* (Adam, 93) The availability of paraphernalia was perceived as a problem. *'...certain chemists won't sell citric acid which can be a blinking pain...people start using lemon juice, vinegar, I mean that ain't good at all.'* (John, 162)

b. Supervised Methadone Consumption

Similarly to needle exchange, participants had positive and negative views and experiences of supervised consumption.

The ability to obtain methadone from a pharmacy local to them was important to several participants, *'I think they have improved it a lot by having all the pharmacists agreeing to supervise it over the counter rather than having to go to* [the drug clinic] *because it's made life a lot easier for people, particularly if they have to come from far away...a lot of people weren't able to keep on the methadone just because they couldn't get hold of it...so just being able to pick it up from the local chemist is great and a lot easier.'* (Sam, 29)

The benefits of consuming their dose of methadone on the pharmacy premises were identified by a number of participants. These comments were centered on safety. For example, Emily pointed out that, *'...if you didn't take it supervised then perhaps sometimes you would take it all at once...'* (5) Another participant pointed out that attending the pharmacy every day motivated people to get out, *'I think it's to get them up and out instead of wallowing at time...'* (Michelle, 33).

Negative experiences of supervised methadone consumption were widely discussed by participants. Many found the procedure embarrassing with others describing being watched by other customers, *'...my next door neighbour has seen me in here and I found that really embarrassing, you know, partly because of my age I suppose...'* (Patrick, 7), similarly, Kate said, *'...it is a bit embarrassing and I have to stand in the middle of the shop and people see me drinking it. They obviously get*

to know what it is and that is embarrassing because then people know that I am a drug user.' (43)

In order to reduce the embarrassment of drinking their methadone on the premises, several participants discussed the use of a private area within the pharmacy. However, one individual did not realise that this was sometimes an option, *'...but supervised, I hated it, drinking it out there in front of people. Apparently you can come in here* [private room] *but I didn't like it at all.'* (Pamela, 9) Participant's views on the availability and use of private areas are discussed below.

Several participants commented on the length of time that they had been on supervised consumption. Michael said, *'I have been doing it for three years now and it does piss me off.'* (5)

Three participants described the temptation to 'use' when they came across other drug users in or around the pharmacy. Alex explained, *'...it's almost like a coming together place as well, unfortunately that is another downside of coming to a chemist is you see other drug users and other drug users for a drug user is quite often the inspiration to go out, and "oh well I'll just have a bit today because I have bumped into such and such"'* (37)

c. Provision of Advice

Participants described how they used the pharmacist for advice about minor illnesses and skin care. Alex said, *'...if it was concerning a sort of piece of health,*

yes, I would ask the pharmacists' advice. I pick up, I am an asthmatic, and get my insulin here, have done for longer than I have been picking up methadone.' (68)

However, participants seemed less keen to ask advice on aspects of their drug use. For example, with regard to safer injecting, Adam felt that people would be more likely to ask someone who uses. *'No, I don't think they would ask a pharmacist* [about safer injecting] *...I think they would be embarrassed. You are probably more likely to ask someone who uses more than a pharmacist...I think it's more of a case of, you could call it class distinction. They think they can't ask that person about that because what would they think of me?'* (63-73)

Others felt that the pharmacy was not suitably private to ask questions about their drug use. *'I don't think people would* [ask the pharmacist about drug use issues], *because I wouldn't ask, especially standing in a shop saying excuse me, with people listening...'* (Marcus, 73) It was also pointed out that there were other avenues of drug misuse advice open to individuals, *'You can go to centres and places like that... and ask questions there.'* (Helen, 115)

One participant commented on a leaflet that had been given to him by his pharmacist, [and the leaflet, did it tell you how to inject safely?] *'I assume it did, I didn't read it!'* (Marcus, 33)

4.3.2.3. Attributes of pharmacy staff

Participants described both ***positive*** and ***negative*** attributes of pharmacy staff. Most of the comments were positive in nature and seemed to impact well on the

participant, however, where negative comments were made it was clear that these also had an impact on the participant.

a. Positive attributes

Several participants talked about being treated like any other customer. *'I have come in here for needle exchanges and, you know, have been on drugs at that time and they just talk to you like, you know, you're a human being. Have a laugh and a joke with them sometimes.'* (John, 45) Similarly Natalie said, *'...they treat you as normal people, you know, talk to you about normal things.'* (41)

Participants also talked about the rapport, respect and trust that are built up with pharmacy staff over a period of time. This was always appreciated. *'...since I have got to know them all properly and have been coming in here for a year and it's been fine, I've been fine. I've got to know them; they don't judge you, or I don't feel they do anyway and they are really nice people.'* (Michelle, 17) Patrick remarked that they attitude of the pharmacy staff made him look forward to going to the pharmacy, *'Most of the staff are fine, you know I quite look forward to coming up here actually because they react with us, they are good people...'* (43)

Two participants remarked on the pharmacists' knowledge of drugs. *'...they know what they are giving. They are also probably very well clued up on the kind of pharmaceutical stuff that can be abused. So they probably see that it doesn't get into the wrong hands, which is good.'* (Alex, 126)

Participants also spoke about the empathy shown by the pharmacists and their staff. Michael said, *'Like when I just come in then, the lady down the counter said "Oh Michael where was you on Friday?" because I pick up on Friday, she said "I was worried about you." So they are lovely ladies and I said "Oh thank you, that's nice that is!" They are always polite. I think you couldn't get a better chemist than this.' that is!"* (35)

b. Negative attributes

Many of the negative attributes of pharmacy staff were the opposite of the positives described above.

Unfortunately, some participants described how they felt that the pharmacist and pharmacy staff judged them. Michelle described how *'...the first day I walked in I was totally really embarrassed, put my head down, stood there and just felt like they were judging me.'* (5) Michael explained how he felt labelled, he said, *'I mean they think, oh well look at that junkie and you have got a label on you straight away.'* (5) Kate explained how she felt that there was a stigma attached to needle exchange, *...like when they do the needle exchange bit, you know, I have had them like give me the needles as if they don't want to touch me, things like that.'* (9)

Some participants described the lack of conversation and rapport in some pharmacies. *'I remember the last chemist...do you know what I mean, it's like give you your methadone and that's it, out the door.'* (Michael, 35)

Two participants described how staff reacted when other customers made adverse comments about them. *'...often you get comments like "Do you get sherry with that?" or things like that you know, it's not good.* [Do they defend what is going on?] *No they don't say anything, no.* (Patrick, 23-39)

4.3.2.4. Consequences of being in drug treatment

All the interview participants commented about the wider issues around being in drug treatment. The discussion and therefore the sub-themes were divided into three main areas; ***Treatment Services, Consequences of being in drug treatment and Compliance.***

a. Treatment Services

Alex described how the 'harm reduction agenda' had increased the availability of methadone, *'...attitudes have changed over the years and realistically now there seems to be an attitude of harm reduction so they are giving out methadone scripts quite freely to people who are using heroin in order to stop them causing themselves self-harm.'* (10)

However despite this, in some areas participants commented on the excessive waiting times for treatment. *'...if a person wants to go to* [local treatment service] *now and say "listen I am a heroin addict and I need help now" not in 14 months time like the waiting time is. I mean I have known people who go out to get arrested on purpose, to do an arrest and referral...7 days and they don't do no more.'* (John, 201)

Several participants commented on the stabilising nature of being on a methadone prescription. Alex commented that *'the methadone programme itself probably is one of the most stabilizing things that there is...'* (10) Similarly, Patrick said that *'I haven't been in prison for 13 years but the only time I ever get into trouble is when I haven't got a script.'* (204)

b. The consequences of being in drug treatment

Participants discussed the difficulty in going away because of the need to attend the pharmacy on a daily basis, *'...if I wanted to go out at the weekend I couldn't go because if someone said 'do you want to come away for the weekend' I can't go on Saturday because I have to pick up my methadone...'* (Adam, 81)

Similarly, Michael commented on how getting to the chemist every day was 'ruling' his life. *'I don't know about other people, but I have got other things going on in my life and I have to come from* [location] *every day to get my methadone. I didn't pick up Friday because I couldn't be bothered to come over here.'* (9)

Several participants commented on the 'fear of being ill' and saw getting a methadone prescription as a way of preventing this. One participant explained how his friend committed suicide because he could not handle the heroin withdrawal. *'...there are so many people on the street that get ill and they get suicidal, you know I have known people hang themselves. My best mate hung himself 'cos he was staying at his mothers and he was ill and he just didn't know what to do... at the end of the day these people can't take being ill and it is not fair when things like methadone and that which could sort people out...'* (Patrick, 240-251)

c. Compliance

Participants alluded that the nature of the methadone treatment program was based on compliance or adherence driven. There was significant discussion about the impact of missing doses. Marcus explained, *'I have missed doses of methadone before, and it's been having to keep appointments, not being able to get back in time, thinking, 'Oh I should be able to get back in time' and not being able to make it...'* (83)

Other participants suggested that some people missed doses because they had been using heroin. *'...sometimes if people are using, I suppose. If they have used they think oh well you know I don't need to come and get it...'* (Kate, 91)

Several participants could not understand why people would miss their doses of methadone. *'I actually can't realistically understand it... when you can pick up from 9.30 in the morning right through to 6.30 at night, that's a bit wishy washy, you know if they miss it's their own fault.'* (Alex, 130)

Participants were asked whether the pharmacist should tell the prescriber if a client was missing doses, most agreed that they should divulge this, if a client was regularly missing doses. Helen pointed out that people risked overdose if they missed their methadone pick up. *'Well, you keep your programme together. If you miss then you could obviously be using elsewhere and you* [the pharmacist] *could put someone at risk by giving them an overdose...'* (155)

Some participants had had experience of pharmacists withholding doses of methadone from clients. The main reason cited was if a client attended the pharmacy under the influence of alcohol or other drugs. Sam explained, *'I used to drink quite heavily but I don't drink at all now. They* [the pharmacist] *are not supposed to give it out if they think you are going to overdose if you have methadone as well. That would be quite a problem...'* (85)

It was acknowledged that the pharmacist may face a difficult situation should they decide to withhold a dose of methadone. *'...people are likely to get very irate, especially if they are drunk, but I suppose they have to explain it to their faces and tell them bluntly if they think they are going to overdose and kill themselves...'* (Sam, 89)

Several of the pharmacist interview participants talked about the existence of a contract between the client and the pharmacist. Service user interviewees were asked about their experiences of these contracts.

Participants discussed the nature of the contracts and most agreed that it was a way of defining acceptable behaviour on the part of the client. *'...just to be on good behaviour, when you are coming into the premises don't try and thieve nothing, you know you are coming in here for a reason, for your medication...'* (John, 165) Marcus suggested that the contract could state that *'prescription drugs will be withheld if you come in under the influence, or if the chemist thinks you are too far under the influence, then he has got the right to withhold it and any violence, whether it be verbal or physical then the chemist has got the right to refuse.'* (181)

Some of the participants thought that to have a contract regarding behaviour was assuming that the pharmacist was going to have problems. *'It's sort of assuming that they are going to be a problem before anything actually happens...'* (Sam, 115) Other asked why they should be treated differently from other customers, *'...as far as I am concerned they are just getting a prescription and they are there to give us our medicine, the same as anybody else who's prescribed medicine so why should we be treated* [differently]... (Kate, 127)

4.3.2.5. The importance of privacy and confidentiality

a. Privacy

Participants discussed the importance of private areas that are available in some pharmacies in order for clients to take their methadone dose in private. Marcus said, *'I just come in daily and stand there and drink it, but yeah, it could be a room or something like here to drink it in. It would be a lot better because I do feel embarrassed sometimes when I have to stand there and drink it and especially when you know people. I walk past sometimes and see people I know...'* (9) One participant thought that a private area would be a good idea, but acknowledged that it was impractical in some pharmacies, *'...if they haven't got the space then obviously you have to make do with what you have got...'* (Patrick, 7)

John felt that pharmacies that provide supervised methadone consumption should have their premises modified in order to provide a private area, *'I feel that it should be done to quite a lot of pharmacies if, you know, they are doing methadone and suchlike...'* (13)

b. Sharing Information

Participants were asked what information about themselves and their treatment they would be happy for the pharmacist to know. Interviewees were split into two main views. Some felt that information about them was confidential between the client and their doctor, *'I think at the end of the day it should be a confidential thing between you and the doctor. A pharmacist is just somebody who is dishing out what we got. It's like if anybody goes in with an illness, do they ask anything about them? So what's the difference really...?* (Adam, 134) Helen did not see why pharmacists would need more than basic information about the client, *'I don't know, I think they know enough really; the name and address, date of birth. I can't see why they would need more information...'* (143)

Other participants did not seem worried by pharmacists knowing and sharing confidential information with the prescriber and key worker. John said, *'I can't see no harm, I can't see no harm in the pharmacist knowing a bit more about this person who they are serving...'* (123)

Sam made a good point whilst talking about information sharing between the pharmacist and doctor, saying, *'... this is highly contentious. It is how much information people want to give I think... out of choice and whether they answer questions, if there were questions involved in it or not...'* (123) she went on to clarify this point by saying, '*Whether you get your methadone or not shouldn't depend on whether you answer the questions...'* (127)

4.3.2.6. Views on a proposed extension to the pharmacists' role

Interview participants were asked for their views on the idea of pharmacists being able to ***prescribe methadone*** following a change to the laws around prescribing. Participants also discussed their suggestions for ***training topics*** that pharmacists who provide drug misuse services should undertake.

a. Pharmacist Prescribers

Participants had a variety of views with some supporting the notion and other suggesting that prescribing should be left to doctors.

John thought that pharmacists prescribing methadone would make treatment more accessible. He said *'Well, that sounds unbelievable really... that's just what's needed Rachel, you know, because if a person wants to go to* [local drug service] *now and say 'listen I am a heroin addict and I need help now', not in 14 months time like the waiting time is.'* (197-201)

Other participants thought that pharmacists prescribing methadone was a good idea, but that it should be for people on maintenance prescriptions, *'...if you were on methadone regularly and had been on it a while then I think that is quite a good idea really to save me going there* [to the drug clinic]. *You know they could drug test you and as long as you were drug free and that continues doing methadone from here* [the pharmacy] *could save you going* [to the drug clinic]*'* (Kate, 149) Similarly Sam agreed with the idea, providing the pharmacists had had the correct training. *'As long as they had the training to know about it I think it would be*

excellent because again it would mean a lot more than just a few people being able to deal with prescriptions...' (157)

Those who were not in favour of pharmacist prescribing felt that it may be abused by some heroin addicts. *'...people would abuse it wouldn't they...I don't think it would be a good idea because I could say, for whatever reason, maybe I wanna get loads of prescribed drugs and sell it...'* (Marcus, 233-241)

There was a perception that the pharmacist would be 'easier' than a doctor when it came to getting a methadone prescription. *'...with a doctor it's a lot harder, as I would say, to get blood out of a stone from any of them, but doing it the way you have just mentioned I think there would be a lot more people taking the mickey...'* (Michelle, 136)

b. Training Topics

Most of the participants suggestions for pharmacist training could broadly be described as having a harm reduction theme.

Several participants suggested that pharmacists should know more about the injection process and the use of paraphernalia. Adam said, *'...as I have said, some pharmacists don't sell needles and how important that can be...certain chemists won't sell citric acid which can be a blinking pain... people start using lemon juice, vinegar, I mean that ain't good at all.'* (162)

Two participants felt it was important that the pharmacist was able to recognise when clients were intoxicated. Marcus suggested, *'...training so that they can tell which drugs people are under the influence of, like I can tell, because I have done it all, whether someone's on an upper or a downer.'* (201) He went on to describe how it was possible to tell the difference, *'By pupils, if they are on crack their pupils are massive, if they are on heroin their pupils will be pins, if they are drunk or stoned they are watery and red...'* (205)

Helen gave reasons why it was important to know what drugs an individual could have used, *'Recognising the right signs to not give people their methadone because they could be high on something else that methadone could be useful. Because if someone is high on crack, methadone would be very handy to bring that person down, you know they might be really jittery and acting really oddly, you know, so it would be helpful to recognise things like that. Holding it back from someone in that state could be fatal really for their sanity.'* (171)

John felt that pharmacists should have a deeper understanding of why a person is on a methadone prescription. He said, *'They should have a bit more understanding about what methadone is and a bit more understanding about why a person has gone down that path...'* (173) He explained that his pharmacist *'...doesn't really understand about why a person is getting methadone, why it's for heroin misuse, yeah, but it goes far deeper and I think if they was to know a little bit more about that, why this person is getting methadone...'* (177)

One participant suggested that pharmacists should know more about street drugs. *'I mean I think it would be good to have that extra knowing about hard drugs on the street and such...'* (Michelle, 106)

4.3.3. Summary of Themes and Sub-themes

Theme	**Effect of Past Experience on the Attitude of Service Users**	**Experience of current pharmacy services and perception of the pharmacists role**	**Attributes of Pharmacy Staff**
Sub-theme	1. Extrinsic Factors 2. Intrinsic Factors	1. Needle Exchange 2. Supervised Methadone consumption 3. Provision of advice	1. Positive 2. Negative
Theme	**Consequences of being in Drug Treatment**	**Importance of Privacy and Confidentiality**	**Views on a proposed extension to the pharmacists role**
Sub-theme	1. Treatment Services 2. Consequences of being in treatment 3. Compliance	1. Privacy 2. Information Sharing	

Table 31: ***Summary of Themes and Sub-themes of Interviews with Service Users***

Chapter Five

DISCUSSION

CONTENTS

5.1. STRUCTURE OF THE DISCUSSION

The discussion will be divided into two main parts. Firstly, the results of the project will be discussed in the context of the objectives that were described in section 2.11. on page 71. Following this there will be a discussion of the methods used for each objective.

5.2. CONSIDERATION OF THE OBJECTIVES OF THE THESIS

5.2.1. Ascertain the current level of community pharmacy involvement in service provision to drug misusers

5.2.1.1. Selling Injecting Equipment to Injecting Drug Users (IDUs)

Analysis of the postal questionnaire has allowed the number of pharmacies in the South West who are prepared to make injecting equipment available by way of sales to IDUs to be ascertained. 19.1% (n=135) of respondents had sold injecting equipment in the week before the questionnaire was completed, with a further 31.4% (n=222) of respondents replying that they were willing to sell, but had not had any requests in the week before the questionnaire was completed. This gave a total of 359 'willing sellers' (50.5% of respondents) However, over two-fifths (42.3%, n=299) of respondents did not make sterile injecting equipment available to IDUs through the sales of such products.

The relationship between lack of willingness to sell and lack of request to buy could not be deduced from the results of the postal questionnaire, however a comment made by a pharmacist who was subsequently interviewed for the second part of this research (see section 4.2.2.6. on page 145) suggests that some pharmacists may be unwilling to sell injecting equipment for fear that they may become inundated with drug misusers requesting sales, especially if other local pharmacies choose not to provide a needle exchange service or do not sell injecting equipment. Therefore increasing the number of pharmacy based needle exchanges in an individual location will help prevent pharmacies from being inundated.

The last estimate of the number of pharmacies in England willing to sell injecting equipment to IDUs was made by Sheridan in 1995. As methodological differences exist between Sheridan's work and the work presented in this thesis (for further discussion of this see section 5.3.1.5 on page 241) direct comparison between the studies should be done with caution. However, if the situation in the South West in 1995 is reflected in the findings of Sheridan this would suggest that the number of 'willing sellers' of injecting equipment has fallen with Sheridan reporting that 75.9% (n=1489) of her sample of pharmacies in England and Wales were either currently selling or willing to sell injecting equipment. Furthermore, the number of pharmacies unwilling to sell injecting equipment appears to have risen since the 1995 survey. (24.1% in 1995 and 42.3% in 2003)

These findings raise concern about the overall availability of sterile needles and syringes to IDUs. Those pharmacies that were not prepared to sell or exchange needles and syringes commonly stated their reasons as '*needle exchange location nearby*' (15.9%, n=86) and '*no returned sharps facilities*' (7.8%, n=42). The former suggests the assumption that only one outlet per area is deemed adequate to meet need, a belief not supported by the findings of a recent survey of needle exchanges conducted by the NTA, (NTA, 2006) or in the work of Parsons et al (2002). The latter is likely to be in response to the RPSGB's statement in their Code of Ethics (December 1997 onwards) that says '*Only in exceptional circumstances should pharmacists provide clean injecting equipment if the pharmacy has no arrangement for taking back contaminated equipment.*' The question as to why pharmacies refuse to sell needles and syringes rather than provide disposal facilities requires more detailed study. It may be the cost of providing disposal facilities falling onto the pharmacy owner is a deterrent. It could also be a lack of willingness to handle disposal bins of used equipment or a desire to discourage IDUs from entering the pharmacy. One avenue for exploration could be the provision of free sharps bins and disposal facilities to pharmacies, coupled with training on the safe handling of sharps bins, to establish whether this promotes an increase in the number of pharmacists willing to sell equipment. The RPSGB's ethical code statement is apparently well meaning advice to protect public health, but it pays no attention to the findings of Parsons et al showing that there is only one new set of injecting equipment for every two (or in Scotland every four) injections administered. Thus removal of used injecting equipment from circulation is unlikely to be achievable

as long as the need for injecting equipment is unmet by the supply levels of new sterile needles and syringes.

5.2.1.2. Needle Exchange

The results of the postal questionnaire indicate that 15.1% (n=107) community pharmacies in the South West of England provide a needle exchange service and tentative comparison with the results of Sheridan's 1995 survey suggest that the extent of pharmacy based needle exchange in the South West has fallen. (17.9% - Sheridan (1996) versus 15.1% - current study).

The current level of pharmacy based needle exchange in the South West of England is higher than recent figures from Scotland where Matheson (2006) reported that 13.9% of Scottish pharmacies were providing the service. However, the trend in Scotland is that increasing numbers of pharmacies are providing needle exchange, (8.6% in 1995; 9.7% in 2000 and 13.9% in 2006) whilst in England the numbers appear to be declining.

Concerns regarding the availability of needle exchange for injecting drug users in England have recently been raised following an audit of needle exchange provision conducted by the NTA (2006). Whilst the report admits that data collection for the audit was challenging, it concluded that there was significant variability in the commissioning and provision of schemes by local drug action teams. The report suggests that rural areas were more poorly served than urban areas; however living in

an urban area did not always guarantee access or availability to harm reduction services.

The findings of the NTA audit provides weight to the apparent reduction in pharmacy based needle exchange in the South West of England that has been described in this thesis, and strongly suggests that it should be a priority to identify whether pharmacy based needle exchange numbers have remained static across the rest of England and in Wales.

Twenty-nine per cent of respondents to the full version of the questionnaire who did not provide needle exchange said it was because there was 'no demand' in their area. This is despite the increasing numbers of injecting drug users, the increasing prevalence of HCV, concerns previously expressed about HCV incidence in newer injectors and the sharing of equipment (Judd, 2005). Demonstrating this increasing need for sterile injecting equipment may make some pharmacists more likely to provide the service, as 24.3% of respondents who did not provide needle exchange said that they may consider doing so if an increase in demand could be demonstrated.

Sixty-seven respondents (19.9%) to the postal questionnaire who were not providing a needle exchange scheme said they would consider doing so if 'funding' was available. In England, the amount of funding for needle exchange schemes varies according to the commissioning body. However in Wales, a national contract and payment scheme for needle exchange has been negotiated (Community Pharmacy Wales, 2006) which

standardises the level of payment available to Welsh pharmacy contractors who provide a needle exchange scheme. Close attention should therefore be paid to the extent of pharmacy based needle exchange in Wales to ascertain if the national payment scheme increases the availability of injecting equipment through pharmacies.

5.2.1.3. Methadone Dispensing

Analysis of the postal questionnaire has ascertained that 69.2% (n=489) of pharmacies in the South West of England dispense methadone for the treatment of dependence.

Cautious comparison with previous studies conducted in England and Wales would suggest that the number of pharmacies dispensing methadone to drug misusers appears to have increased with the mean number of clients per pharmacy also increasing. This is to be expected, as the number of drug misusers receiving treatment has increased. The data also suggests that the apparent increase in the percentage of pharmacies that dispense methadone between 1995 and 2003 (19.1%) is mirrored by a smaller rise in the mean number of methadone clients per pharmacy (1.1 clients between 1995 and 2003). Thus the workload between these dispensing pharmacies is now suggested to be better spread than it was in 1995.

	1988	**1995**	**2003**
	Glanz	Sheridan	Current study
Dispense methadone (%)	23.0	50.1	69.2
Mean methadone clients per pharmacy	3.5	5.9	7.0

Table 32: ***Comparison of methadone dispensing activity***

5.2.1.4. Supervised Consumption of Methadone

Analysis of the postal questionnaire shows that 70.1% (n=434) of pharmacies in the South West of England who dispense methadone provide a supervised consumption service.

Previous studies in England and Wales did not collect data on this aspect of service provision; however such data does exist for Scotland, where Matheson (2002) reported the number of community pharmacies providing supervised consumption to be 56.7%.

More Scottish drug misusers were receiving their daily methadone dose under the supervision of a pharmacist (65.1%) compared with 49.5% in South West England, showing that a greater level of service activity is undertaken by fewer pharmacies in Scotland with an increase in workload of those pharmacies who participate.

The National Treatment Agency (NTA) advocate primary care services in the treatment of drug misuse and mentions pharmacy based services including supervised methadone consumption. It is not a surprise, therefore, that the majority of prescriptions for methadone in this study arose from primary care. Supervised consumption of methadone is also recommended in the Department of Health publication 'Drug Misuse and Dependence: Guidelines on Clinical Management (1999) for the first three months of treatment and the results of this survey show that just under half the prescriptions for methadone were supervised. There are regional variations across the South West of England, In Avon, Gloucestershire and Wiltshire StHA, 60.2% of methadone clients

received their methadone by supervised consumption compared with 38.9% in Dorset and Somerset StHA, and 37.2% in South West Peninsula StHA. More information about the drug misusers and where they are in the treatment programme before comment on the relative rates of supervised consumption is made. Despite this, Dorset and Somerset, and the South West Peninsula StHAs contain more rural areas than Avon, Gloucestershire and Wiltshire StHA. Drug misusers living in more rural areas may have difficulty in getting to a pharmacy for a daily dose of methadone. It is also possible that more drug misusers in these rural areas are on maintenance treatment and may therefore be able to pick up their prescriptions less frequently. High levels of supervised consumption in individual locations may be in response to local policy or a local response to reports of methadone entering the illicit market.

Problems associated with dispensing methadone to drug misusers

Two hundred and three (52.7%) respondents to the full version of the questionnaire reported having to stop dispensing methadone to one or more individuals. This was mainly due to unacceptable behaviour on the part of the drug misusers.

The decision to stop dispensing to an individual was often difficult to make, as until 2004, refusing to dispense an NHS prescription was at odds with the NHS terms for the provision of pharmaceutical services, which required that *'All valid prescriptions for drugs that are presented must be supplied with reasonable promptness.'* However, with the introduction of the new contractual arrangements in advance of the 'New Pharmacy Contract for England and Wales' (PSNC, 2004) a change in the wording of the contract

does not now require a contractor to dispense 'all valid prescriptions' thus giving pharmacists the ability to stop dispensing to an individual.

The refusal to dispense medication to a drug misuser is not therefore illegal, but becomes an ethical consideration, since refusal to dispense substitute medication may provoke the individual concerned and precipitate an altercation. The individual may start to use or increase their use of illicit drugs with associated increase in harm to that person

It is suspected, but cannot be concluded from the questionnaire data that the level of support for pharmacists who provide drug misuse services is variable. This is important because it is likely that such support would be welcomed by pharmacists who have to decide whether or not to carry on dispensing for an individual. Pharmacists should be encouraged to consider the ethical implications of refusing to dispense substitute medication to an individual as well as the legal consequences of doing so.

Similarly, it is likely (but cannot be concluded by the data from the questionnaire) that support and training will be important if a pharmacist has to make the decision to withhold a dose of methadone from a client. For example, pharmacists who dispense methadone should be aware of the risks associated with alcohol and methadone combined, as this is a major precipitant of opiate overdose (Dark, 1996), and one which could be reduced if clients intoxicated with alcohol were asked to return for their methadone when sober.

5.2.1.5. Practical Aspects of Providing Services

Use of private areas

Since this questionnaire was carried out, it has become a requirement of the New Pharmacy Contract in England and Wales, that all pharmacies who supervise the consumption of controlled drugs for the treatment of addiction should have a private area in which to carry this out. At the time of the survey, 46.5% of methadone dispensing respondents had a private area, but not all chose to offer this to clients who were required to consume their dose on the premises.

The availability of private areas in which to consume their methadone was discussed by service user interviewees. Many felt embarrassed at having to drink their daily dose in view of other pharmacy customers. It was suggested by one participant that pharmacies that provided a supervised consumption service should have their premises modified to include a private area.

Therefore the requirement of the contract is likely to be welcomed by clients required to consume on the premises as pharmacists who responded to the postal questionnaire reported that one quarter of their clients (25.4%, n=50) who did not have access to a private area had expressed a wish for more privacy.

Use of contracts

Most respondents indicated that they lay down some 'ground rules' with new methadone clients, but not all did this with a written contract. This suggests that the

usefulness of contracts is debatable as 40.2% said they 'never' used one. However, 67.9% of respondents 'Strongly agreed' or 'Agreed' to the statement; *'I believe that a written contract between the pharmacist and drug misusers would help to develop trust between the two individuals.'* This suggests that not all pharmacists who think that contracts would help develop trust actually use them in practice. The reasons why are unclear, but it is possible that some respondents do not have access to a suitable contract.

5.2.1.6. Health Promotion and Advice

Respondents were more likely to give face to face (verbal) advice to drug misusers than provide leaflets. Two-thirds of the respondents (65.4%, n=252) *'never'* gave out leaflets about drug misuse but would *'always'* or *'sometimes'* give verbal advice (60.2%, n=232). Similarly, nearly three-quarters of respondents (74.0%, n=285) *'never'* supplied information leaflets about methadone to new clients but would *'always'* or *'sometimes'* give face to face advice about methadone (70.1%, n=270). These results suggest that respondents do regularly communicate with their drug misusing clients; however, by not providing leaflets, they may be missing an opportunity to provide health promotion advice to a wider audience of drug misusers. In interviews with drug misusers conducted by Sheridan (1996), respondents felt that pharmacies should provide information leaflets. It is unclear as to whether these leaflets would actually be read however, as interviews with service users for the current study suggested that whilst leaflets are provided (for example, in needle exchange packs); they are sometimes not read.

It is possible that some clients may not feel able to ask for advice, but would pick up a leaflet. The service user interviews conducted for this study revealed that whilst clients regarded the pharmacist as a source of advice for general health concerns, they were less likely to seek verbal advice about aspects of their drug use, especially on the topic of safer injecting. Service user interview participants described feeling uncomfortable about the thought of asking advice on safer injecting from a pharmacist. Bearing this in mind, it is likely that leaflets would be a useful source of anonymous advice for these clients.

The availability of advice from respondents' pharmacies about the prevention of HIV and other blood borne disease is concerning. The majority of respondents (81.8%, n=315) reported *'never'* providing leaflets about HIV prevention to new drug misusing clients and 64.4% (n=248) *'never'* offered face to face advice on the prevention of HIV. As the community pharmacy is an accessible place for health related advice, it is vital that pharmacists seize the opportunity to provide this advice. It is not possible to explain why written information on HIV prevention was not provided by the vast majority of respondents. However, since only 24.0% (n=127) respondents to the full version of the questionnaire reported receiving training on the prevention of blood borne disease, it is likely that the majority of respondents felt unable to provide verbal advice. It is encouraging however that 78.6% (n=416) said that they would like **further** training on the prevention HIV transmission.

The results of this study are of limited value in assessing the provision of information about reducing the transmission of other blood borne disease, since the questionnaire asked only about HIV. A study of IDUs conducted by the Health Protection Agency (HPA) in 2003 revealed that the incidence of HIV is low (approximately 1%) whilst the incidence of antibodies to the hepatitis C virus (HCV) in IDUs is around 40%.

These figures suggest that pharmacist training should focus on the prevention of all blood borne disease and not just HIV. If the consequences of injecting drugs were focused around the increasing prevalence of HCV, more pharmacists may be motivated to provide needle exchange schemes.

The current lack of relevant training on blood borne disease in the light of the findings of the HPA is likely to be associated with a lack of advice provision on the subject. This, coupled with an apparent reduction in the numbers of pharmacies providing needle exchange schemes in the last decade (15.1% versus 18.9% in 1995) and a reduction in the number of pharmacies willing to sell needles and syringes to suspected drug misusers (31.6% versus 41.3% in 1995) suggests that the prevention of the transmission of blood borne disease should once again become a priority for policy makers to help reduce the incidence of HCV in IDUs.

In addition to a UK wide strategy to increase the number of pharmacy based needle exchanges, the ease of availability of advice on the transmission of HCV should be regarded as an important consideration.

However, it is of concern that the recent Department of Health pharmaceutical public health strategy (Department of Health, 2005) excludes the provision of services to and care of drug dependent people, suggesting that the extension of needle exchange and other services has been overlooked as a necessity. Similarly the new community pharmacy contract defines needle exchange as an 'enhanced' service, not core activity.

5.2.1.5. Summary of Objective One

The results of the postal questionnaire suggest that whilst the number of pharmacies dispensing methadone in the South West of England appears to have increased since Sheridan's 1995 survey, the extent of needle exchange provision and needle/ syringe selling activity appears to have decreased.

It is possible that these two results are linked, with pharmacies choosing to stop needle exchange services in favour of dispensing methadone, however, this hypothesis requires further research and cannot be confirmed from the results of the postal questionnaire.

In view of the recent NTA audit on needle exchange provision in England, it should be a priority to ascertain how increases in pharmacy based schemes can be achieved.

5.2.2. Describe the range of knowledge and attitude of pharmacists who provide services to drug misusers

5.2.2.1. Knowledge of Respondents on Aspects of Drug Misuse

The aim of part three of the questionnaire was to gauge respondent's knowledge on the subject of drug misuse. The results give an indication of the areas that could be addressed in training sessions for pharmacists who provide drug misuse services.

Respondents scored an average of 8.4 marks (max 15) on questions 28 to 34. These results cannot be compared with other studies as this is the first survey which has attempted to quantify pharmacist's knowledge in this area. However, one can look at the spread of answers to each question and identify areas of potential training requirements. One area is around methadone pharmacokinetics and dosing as over half of the respondents to the full version of the questionnaire (56.3%, n=298) did not know when a person's tolerance to methadone would be reduced to a point where the original dose may cause toxicity.

A degree of knowledge of the pharmacokinetics of methadone is important if pharmacists are presented with a client who has not picked up their dose of methadone for a number of days. After a break of three days without methadone or other opiates, consuming the original dose of methadone may cause the patient to overdose as their tolerance to opiates will have fallen (Darke, 1996), thus, a pharmacist who dispenses the original dose after a break of more than three days may put the patient at risk.

Similarly, pharmacists should be aware of the risks of overdose when methadone is given to a patient who is intoxicated with alcohol. Although relatively few pharmacists (16.1%, n=85) said that they would give methadone, the implications of this to the patient is concerning as methadone and alcohol together are responsible for a number of deaths. (Darke, 1996)

Recognising the signs of opiate intoxication is an important clinical governance issue if a pharmacist is presented with a patient for whom dispensing a dose of methadone may result in harm to the patient, and it is therefore concerning that 26.3% (n=139) of the respondents to the full version of the questionnaire were unable to list any signs of opiate intoxication. Failure to recognise the symptoms of intoxication and subsequently dispensing methadone to an individual may result in an accidental overdose, therefore, recognising symptoms of opiate intoxication should also form part of a pharmacists' training on drug misuse.

Another potential area for training is around the supervision of sublingual buprenorphine. Respondents appeared to be confused about how long it takes for the full dose to be absorbed from the buccal cavity with 90.8% (n=480) respondents replying between *'30 seconds'* and *'until dissolved'*.

This highlights the need for clear guidance on supervising the consumption of buprenorphine, however useful guidance will need to include an indication of the length of time that a patient is supervised. The Royal College of GP's suggests that this

should be until the tablets are dissolved which may be five minutes or more (Ford, 2004), however at the time of writing, the UK manufacturers of sublingual buprenorphine were unable to provide any information on the time taken for the dose to be absorbed from the buccal cavity. It is possible that waiting for the tablet to be dissolved completely is unnecessary and if this were to be the case then the length of time that the patient has to remain in the pharmacy could be reduced.

Further guidance and training on the supervision of buprenorphine is required as there is likely to be a variety of practices occurring, which may not all the appropriate or necessary.

Relationship of knowledge to service provision

Respondents who provided a needle exchange scheme had a significantly higher knowledge score than those who did not provide the service. This may be because the majority of needle exchange pharmacists (71.7%, n=66) reported having received training in order to provide the service.

The knowledge score was calculated from questions about several aspects of drug misuse and treatment and not just needle exchange. This suggests perhaps that these pharmacists have undertaken other training in order to extend their knowledge of the subject or simply that these pharmacists have a greater contact with drug misusers which has subsequently raised their knowledge in the area.

Past training received and future training requirements

The number of respondents who reported having received training on drug misuse and the prevention of blood borne disease was lower than numbers reported by Matheson (2002) in Scotland, Table 34 summarises these differences.

	Matheson (2002)	**Current study**
Received training		
... on drug misuse	66.8%	51.7%
... on blood borne disease	35.2%	24.0%
Desire training		
... on drug misuse	70.5%	82.8%
... on blood borne disease	79.4%	78.6%

Table 33: ***Differences in levels of past and future training on drug misuse and blood borne disease between Scotland and the South West of England***

One possible reason for the higher numbers of pharmacists who have received training in Scotland compared to the South West of England may be related to the average number of methadone clients that pharmacies in Scotland have. (13.2 compared to 7.0 in the South West of England) This may make Scottish pharmacists more likely to undertake such training as providing services to drug misusers may be seen as a substantial part of their professional duties, however in parts of Scotland; pharmacists have to undertake training in order to be paid for providing drug misuse services (J. Scott, personal communication).

More pharmacists from the south west of England desired further drug misuse training than their Scottish counterparts and this may simply reflect the fact that less south west pharmacists have had any training on drug misuse (51.7% in SW England versus

66.8% in Scotland). Similar numbers of Scottish and south west pharmacists desired further training on blood borne disease (79.4% in Scotland and 78.6% in SW England).

Sixty per cent (n=105) of respondents who made suggestions about the content of future training sessions (n=175) mentioned the need for information on the *'practical issues'* surrounding drug misuse. These issues and others such as *'how to provide a better service'* could be dealt with by way of local workshops which were a suitable training vehicle for 57.0% (n=247) respondents. Local workshops give the opportunity for interaction and networking between pharmacists and other healthcare professionals. Workshops give a wider scope for the type of training that can be given, but time and availability may prevent some from attending.

Training needs were further explored in qualitative interviews with pharmacists who provide drug misuse services. The *'practical issues'* were around best practice and taking an evidence based approach to service provision as well as a desire to have training on how to handle 'difficult situations' that may be encountered.

Service users were also asked about the training that pharmacists should have. In general they felt that pharmacists should be more aware of the impact that using illicit drugs and being in treatment for drug dependence has on the individual. A fuller discussion on the training requirements for pharmacists from the perspective of the pharmacist and the service user may be found in section 5.2.4.1. on page 215.

5.2.2.2. Respondent's Attitude to Drug Misusers

Response to individual attitude statements

The responses to each individual attitude statement (i.e. the proportion of respondents who answered in each stage of the Likert scale) warrant some discussion.

The majority of respondents (83.8%) *'Strongly Agreed'* or *'Agreed'* that all drug misusers should be encouraged to 'come off' drugs altogether (Question 53). Whilst this may be the 'ideal', in the strongest evidence for methadone treatment is when it is used in maintenance programs. (Ward, 1999) The response to this question could indicate that the respondents do not fully appreciate the evidence for maintenance rather than abstinence programs or it could be that they are simply answering the question 'in an ideal world'. Understanding the response to this question is made clearer when looking at the response to question 52. Respondents were split over whether they perceived drug addiction as an illness or a vice. Those who tend to regard addiction as an illness may be more accepting of methadone maintenance as a treatment for opioid dependence and interestingly, respondents were also split over whether methadone should be used for abstinence programs only (Question 41), suggesting that there is a lack of understanding of the evidence that supports the use of methadone for long term maintenance. A further suggestion for a lack of understanding of the evidence around methadone maintenance is provided by comments made by some of the pharmacists interviewed for part two of this research. One commented that he had never seen any one 'kick the habit' (section 4.2.2.6 on page 149).

Most respondents (74.7%) *'Strongly Agreed'* or *'Agreed'* that it was unethical to sell drug misusers' needles and syringes without having a means of disposing of them (question 56). The response to this statement is likely to be in response to the RPSGB Code of Ethics which states that *'Only in exceptional circumstances should pharmacists supply clean injecting equipment for drug misusers if the pharmacy has no arrangements for taking back contaminated equipment.'* (RPSGB, 2006)

This response is one possible reason why the number of pharmacists willing to sell clean injecting equipment to drug misusers has fallen in recent years and it suggests that more pharmacists may be willing to sell needles and syringes to drug misusers if they were provided with a method for safely disposing of returned sharps.

Most respondents (82.4%) believed that the drug misusers should have access to a private area in the pharmacy whilst being supervised consuming their daily dose of methadone or buprenorphine. This is encouraging, as the new pharmacy contract for England and Wales has a requirement for such an area for any pharmacies who supervised the consumption of controlled drugs by drug misusers. (See appendix 7 for the Enhanced Service Specification for supervised administration)

Relationship of attitude to demographic information

A two-way ANOVA revealed that male pharmacists in the 21-34 year age group had a significantly higher attitude score than female pharmacists in the same age group.

Conversely, female pharmacists in the 48+ age group had a significantly higher score than males in the same age group. (see figure 5, on page 131)

Overall, the analysis of age and gender effects on attitude suggests that male pharmacist's attitude to drug misusers' decreases with age, with the reverse being the case for female pharmacists.

There was a small correlation between the respondent's age and their score on the attitude scale (Pearson's, r= -0.094, p=0.039). This suggests that older pharmacists may have a more negative attitude towards drug misusers. This hypothesis is given some strength by the correlation between the number of years that the respondent had been on the Pharmaceutical Register and their attitude score (Pearsons's r=-0.094, p=0.039).

These findings suggest that older pharmacists and those who have been registered for a longer period of time have a more negative attitude towards drug misusers. Oppenheim (1992) suggests that most attitudes lie dormant, and are expressed in speech or behaviour only when the object of the attitude is perceived. Attitudes are influenced by experience; therefore it is possible that older pharmacists have had more 'negative' experiences of drug-misusers which have adversely affected their attitudes towards them than those who have been registered for a shorter length of time. The act of filling in an attitude questionnaire may therefore have bought any negative experiences to the surface and influenced the individuals' responses to the questionnaire.

Relationship of attitude to practice

There was a significant difference in attitude between those respondents who sell or are prepared to sell needles and syringes to drug misusers and those who are not. Similarly there is a significant difference in attitude between those respondents who provide needle exchange and those who do not, and between those respondents who dispense methadone and those who do not. These results are similar to those by Matheson (1999) in a survey of Scottish pharmacists who demonstrated a link between attitude and various aspects of service provision. Matheson concluded that since negative attitudes may inhibit service provision, addressing negative attitudes should be a priority. However, the link between attitude and service provision may be more complex than it first appears, since it is not possible to tell from the results of the study presented here or that of Matheson (1999) whether respondents have a more positive attitude score *because* they provide drug misuse services or if they provide such services because of a more positive attitude towards drug misusers in general. In order to test these hypotheses, a longitudinal study would be required to test the attitude of an individual before they have experience of delivering drug misuse services and then again after they have been providing these services for a suitable length of time.

If the first hypothesis is proven then it would suggest that encouraging pharmacists to provide drug misuse services through training will enhance their attitude. However, if the second hypothesis is shown to be correct then it would indicate that an individual pharmacists' attitude towards drug misusers may not be dependent whether they provide drug misuse services. In this case, modifying attitude by way of increasing the

level of training may not yield an increase in the number of pharmacists who provide services. Indeed, whilst suggesting that further training may address negative attitudes, Matheson (1999) points out that those pharmacists desiring further training already had more positive attitudes than those who did not desire further training.

Relationship of attitude to knowledge

A positive correlation between the respondent's knowledge score and their attitude towards drug misusers was found (Pearson's rho r=0.162, p=0.000).

This is an important finding as it is the first occasion that a link has been demonstrated between the knowledge that pharmacists possess on aspects of drug misuse and the treatment of opioid dependence and their attitudes towards drug misusers and their treatment.

This new finding provides further weight to Matheson's suggestion that training on drug misuse can help influence attitude. It is now possible to conclude that the more knowledgeable an individual is in the area of drug misuse, the more positive their attitude is likely to be.

5.2.2.3. Summary of Objective Two

The range of scores of knowledge on the subject of drug misuse and attitudes towards drug misusers were normally distributed across the respondents to the postal questionnaire.

Knowledge on aspects of drug misuse appeared to be influenced by whether or not participants provided certain drug misuse services, for example those who provided a needle exchange scheme had a significantly higher knowledge score than those who did not.

The range of pharmacists' attitudes towards drug misusers and their treatment appears to be influenced by the age and length of registration of the respondent, whether or not they provide drug misuse services and the score on the 'Knowledge' section of the questionnaire. The link between attitude and knowledge had been previously suggested by Matheson (1999) and the analysis of the results of the postal questionnaire presented in this thesis adds further weight to this suggestion.

5.2.3. Describe the views and experiences of pharmacists who provide drug misuse services

5.2.3.1. Clarification of the Community Pharmacist's Role

Before the views and experiences of pharmacists who provide drug misuse services are discussed, it is pertinent to describe the participants' views of their role.

The role that the pharmacist plays in the treatment of people who misuse drugs was seen as an extension to their traditional role of dispensing and supply of medication. This was described by one interview participant as a *'holistic role'*. For drug misusers in treatment, their pharmacist is likely to see them more often than the prescriber or drugs worker. Many participants in this study recognised the importance of this and felt

that they could positively impact on the client if they identified that *'you don't look very good today'*. Because of their regular contact with clients on opiate substitution schemes, pharmacists are in an excellent position to be able to provide feedback to the client's prescriber or key worker, although the participant's experience of communication with the treatment services was very varied and in many cases participants felt that there was a lack of communication.

5.2.3.2. Experience of Communication and Confidentiality Issues

Where there was communication with the treatment services, the reported extent of information sharing varied. Some participants recognised that they had discussions with the client that they felt should not be relayed back to the prescriber/ drugs worker. Equally, it was recognised by other participants that certain information about the client was withheld from them because of *'client confidentiality'*. Indeed there was a perception that confidentiality is a barrier to two-way information sharing. There appears to be a 'grey area' surrounding information sharing between pharmacist and prescriber/ drug worker and vice versa. It is possible that this is because the pharmacist may not be regarded as an integral part of the clients care, compounded by the fact that most community pharmacists work in isolation from other the other healthcare professionals involved. In a qualitative study, Hughes (2003) investigates the perceived interprofessional barriers between community pharmacists and general practitioners (GP's). These barriers were centred on the 'shopkeeper' image of the community pharmacist, and accounted for the GP's concerns about the involvement of the community pharmacist in extended services. This image of the community pharmacist

may hinder the sharing of confidential information between GP/ key worker and pharmacist if the pharmacist is regarded as a shopkeeper rather than a fellow healthcare professional.

As the importance of the pharmacist in the delivery of care to drug misusers has been highlighted in the current clinical guidelines for drug dependence (Department of Health, 1999) it follows that the pharmacist should be privy to confidential client information in order that their quality of care is sustained and improved.

The Department of Health's document entitled 'Confidentiality – NHS Code of Practice' (2003) gives explicit guidance on how confidential information about patients should be handled. The document poses a number of questions that are designed to ensure that the requirements of law, ethics and policy are adequately addressed when making decisions about the use or disclosure of confidential patient information. The document asks; *'Is the disclosure needed to support the provision of healthcare or to assure the quality of that care?'* and the explanation that justifies such disclosure is as follows: *'Patients understand that some information about them must be shared in order to provide them with care and treatment, and clinical audit, conducted locally within organisations is also essential if the quality of care is to be sustained and improved. Efforts must be made to provide information, check understanding, reconcile concerns and honour objections. Where this is done there is no need to seek explicit patient consent each time information is shared.'*

Interpreting this guidance suggests pharmacists, who are involved in the treatment of opioid dependence through the dispensing and supervised consumption of methadone and other drugs should be privy to confidential information about the client. Failure to share information such as previous history of, and current illicit drug and alcohol misuse may indirectly lead to harm if an intoxicated patient is given methadone. If the pharmacist was already aware that an individual client is likely still to be using illicit drugs and alcohol the risk of overdose from a prescribed dose of methadone may be reduced.

The Department of Health guidance on confidentiality also states that information may be shared in order to improve the quality of care given to the patient. There was a perception amongst the pharmacist interviewees that concerns over confidentiality made two-way information sharing difficult. In order to improve services to drug misusers, the pharmacist must be confident that information about a client that is pertinent to their care is not withheld, in this respect, the guidance on confidentiality should give prescribers and drugs workers the confidence and framework to share information with the pharmacist.

In order to facilitate communication and information sharing between professionals involved in a drug misusers care, there must be clear communication pathway to ensure that each member of the treatment team is aware of information that is pertinent to the clients care. One way of defining this communication pathway is by the use of contracts. One participant viewed the contract as a way of defining individual roles

within the team. An example of such a contract is the 'Berkshire 4-way agreement (4WA)' (Walker, 2001). In this paper, Walker acknowledges that *'communication is built on trust and confidence and this has to develop over time for each professional involved.'*, but recognises that the 4WA *'allows new pharmacists and GPs to join the scheme and be supported, gaining experience and expertise while still ensuring a safe system and high quality of care for the patient.'*

Variations of the 4WA exist outside Berkshire (G. Parsons, personal communication) but there is no 'standard' agreement that defines the individual healthcare professional's role. A role clarification should therefore form part of a model of care to ensure that there is clarity amongst healthcare professionals about what each others role is.

5.2.3.3. Participants experiences of support received to provide services

Unfortunately, most interview participants' felt that they did not receive enough support whilst providing drug misuse services. The participants' description of support varied, with some talking about the need for clear communication pathways so that they knew who to contact if a problem arose. Other participants talked about the need to be properly remunerated for the services that they provide. Training was also identified as a means of providing support to pharmacists and is discussed further in section 5.2.4.1.

Support – contact with other Healthcare professionals

Community pharmacists often work in isolation to other healthcare professionals, and clearly, there must be a recognised support network for those pharmacists engaged in providing substance misuse services. Unfortunately, there is anecdotal evidence that some drug services are unwilling to share contact telephone numbers with pharmacists. (M. Bennett, personal communication). The provision of contact names and numbers of the local drugs service could be facilitated by writing the drug workers contact details on the prescription.

Interviews with three participants uncovered an interesting point of view from those who **are** actively engaged with the drug treatment services. These participants all felt that there was support available if it was sought out, and pharmacists (in general) should actively seek out the support that they need in order to provide drug misuse services rather than passively wait for it. They were critical of other pharmacists who complained that there was no support.

These participants were also similar in that they had gone out to seek support because they were 'interested' in the subject of drug misuse.

This finding is important as it provides depth to Matheson's hypothesis that positive attitudes influence service provision to drug misusers. The finding here suggests that there is a link between interest and therefore willingness to provide drug misuse services and a proactive approach to seeking support. This 'interest' in service

provision may have been a motivation for them to find the support that they needed. It is unlikely, however, that all pharmacists who provide drug misuse services have the same motivation to seek support. For these pharmacists, then, it is important that clear support pathways are defined.

The introduction of compulsory Continuing Professional Development (CPD) by the RPSGB may influence pharmacists who provide drug misuse services to actively seek support through the mechanism of the CPD cycle by identifying areas of practice which require development and defining the support needed to develop.

Remuneration

Most pharmacists are paid for providing drug misuse services by way of a piecemeal system. That is, they are paid *per supervision* or *per needle exchange transaction.* This method of payment rewards volume of work rather than quality of the service provided and as such there is currently little incentive to improve these services.

Drug misuse services such as needle exchange and supervised consumption are classed as 'enhanced services'. In order to provide an enhanced service, the pharmacy must meet a service specification that is defined by the Department of Health. The service specifications are included in appendices seven and eight.

Defining drug misuse services as enhanced services is a cause for concern. Pharmacists are not obliged to provide enhanced services under the terms of the new contract and it is therefore possible that some may opt out of providing such services if they cannot

easily meet the service specification. Earlier work in this thesis has shown that the numbers of pharmacies providing needle exchange services appears to have fallen since the last survey in 1995 was carried out. It is possible that more may drop out of needle exchange in favour of other enhanced services such as Medicines Use Review.

A recent paper by Bradley *et al* (2006) examined the extent of enhanced service commissioning by Primary Care Trusts (PCTS) in England. Whilst needle exchange and supervised consumption schemes were commissioned by 85% and 88% of PCT's respectively, only 15.7% of pharmacies provided a needle exchange scheme and 31.1% provided a supervised consumption service.

The authors concluded that the high level of commissioning of substance misuse services map national priorities for public health, however the paper does not comment on the extent of the cover needed to meet need and allow workload to be shared. In the case of needle exchange, the results presented in this thesis along with work by Parsons (2002) and the NTA (2006) suggest that the extent of needle exchange provision does not currently meet the need of the injecting drug users. PCT's should be encouraged to explore reasons why pharmacies appear reluctant to provide needle exchange.

5.2.3.4. Summary of Objective Three

The views and experiences of pharmacists who provide drug misuse services were varied. Those participants who perceived that they were supported in providing such

services tended to have a more positive view of their role and saw it as an extension to the traditional role of the pharmacist.

The reported extent of communication between the pharmacist and other healthcare professionals varied. Issues surrounding confidentiality were often seen as a barrier to two-way information sharing.

5.2.4. Ascertain the barriers and opportunities to developing community pharmacy services to drug misusers

The barriers and opportunities to developing drug misuse services are discussed in the following section. Consideration has been paid to the analysis of the questionnaire data and of the interviews conducted with pharmacists and service users. Due attention has been paid to the structure of community pharmacy services, such as the development and implementation of the New Pharmacy Contract for England and Wales.

5.2.4.1. Training

The need to adequately train pharmacists involved in the care of drug misusers has been discussed in section 5.2.3.3 on page 211 and Matheson (1999) has made the link between level of pharmacist training and attitude towards drug misusers, suggesting that those pharmacists who had undertaken training on drug misuse had significantly higher attitude scores than those who had not, adding that those who desired further

training in the area had significantly higher attitude scores than those who did not want further training.

Analysis of the pharmacists' interviews suggests that the perception of the availability of training differed amongst the participants and that training with other healthcare professionals allows the individual to network as well as improve the standard of care to the client. Pharmacists are now able to work towards part two of the Certificate in the Management of Drug Misuse which is organised by the Royal College of General Practitioners, and one interview participant who had completed the certificate felt that it had updated his knowledge on the evidence surrounding the treatment of opiate addiction.

Distance learning from the Centre for Pharmacy Postgraduate Education (CPPE) is available to all pharmacists in the United Kingdom. The publication 'Opiate treatment – Supporting pharmacists for improved patient care' provides a useful background to the area as well as some excellent resources, such as a description of the Berkshire 4WA. Whilst this is a useful document, interview participants expressed the desire for other, less 'pharmaceutical' information, such as how people get 'into' drugs, what do they cost and how much do people use. They also highlighted the need for guidance and support on how to handle conflict. The later requirement would be best dealt with during a face to face training event. The former suggestion indicates that pharmacists might benefit from understanding drug misuse from the eyes of the misuser. In this way they may gain an insight into the world of the drug misuser, helping them to understand

certain behaviours and allow them to give advice on other aspects of the drug misuse problem such as injecting technique.

Face to face training with other healthcare professionals may help to build relationship and trust amongst individuals and gives the opportunity to clarify each others role. It has been suggested that multidisciplinary training involving the whole clinical team enhances the successful implementation of clinical guidelines (Grimshaw, 1993). This finding is pertinent to the development of drug misuse services and suggests that the successful implementation of new pharmacy based drug misuse services will be enhanced by ensuring that the whole clinical team is committed and trained to deliver the service in a consistent manner.

Barriers to the delivery of training were discussed by some participants. Principally these barriers were time and cost. Training events for community pharmacists tend to take place outside of working hours. This removes the need to find locum cover in order to be able to attend. However it would be difficult to address all the training needs in one evening session, thus attention must be paid to funding pharmacists in order that the appropriate level of training can be provided.

In the light of the findings of Grimshaw (*ibid*) it is likely, therefore, that inadequate training of pharmacists and pharmacy support staff may be a barrier to providing existing drug misuse services and developing new services, whilst adequate training involving the multidisciplinary team is likely to increase the pharmacists knowledge

and understanding of the subject and may facilitate the enhancement of current drug misuse services provided by community pharmacists.

Content of training

Both pharmacist and service user interviewees commented on the topics that should be included in drug misuse training for pharmacists. It is interesting to examine the difference between suggestions of the two groups.

The pharmacist interviewees were mainly concerned with processes and evidence, suggesting that training should include a clarification of their role within the team; a review of the evidence behind treatment and best practices associated with providing needle exchange and supervised methadone consumption; and practical experience of dealing with conflict.

Service user suggestions of pharmacists' training needs were more practical in nature and could all be linked to a 'harm reduction' theme. Suggestions included an understanding of how people use drugs, and the use of paraphernalia in the preparation of injections and how to recognise infections associated with intravenous drug use. One participant suggested that pharmacists should be able to recognise when an individual is under the influence of alcohol or drugs and which drugs they may have used. Service users also suggested that pharmacists should have more 'streetwise' knowledge about drugs, for example the different 'slang' terms used and how much street drug cost.

What becomes evident from the service user suggestions is that if put in place, these topics would increase the pharmacists' awareness of some of the issues and problems faced by people who abuse drugs, thereby increasing the overall understanding of the nature of drug use. In this way, pharmacists may find it easier to build rapport with their clients.

5.2.4.2. Providing Support and Recognising Teamwork

The pharmacist interviews revealed differing experiences of teamwork and support. Those who felt that had avenues of support available to them, were, in general more positive about providing drug misuse services than those who commented about the lack of support. Indeed, a lack of support following an incidence of violence against his pharmacy staff caused one previously positive pharmacist to question why he was providing drug misuse services at all.

Community pharmacists tend to work in isolation from other healthcare professionals and it is therefore vital that adequate support mechanisms are available to them. A support mechanism that worked well for one participant was the existence of a 'local network' of community pharmacists and GP's who provide drug misuse services. The network meet on a formal basis at training sessions but also contact one another on an informal basis to discuss problems as they arise.

Once again, training was viewed by the interview participants as the most important area of support. As discussed above, training events allow individuals to network with other professionals and help to successfully implement new initiatives.

The recognition of the pharmacist as part of the substance misuse team was seen as an important facilitator to enhancing services. Suggestions of a mechanism by which this could occur included a 'role clarification' exercise for all members of the drug misuse team. One method of role clarification is the use of a contract between the prescriber, drugs worker, service user and pharmacist. The Berkshire 4-Way agreement (Walker, *ibid*) is one such contract that defines the individuals' roles and responsibilities. The use of this contract or variants to it was mentioned by some of the pharmacists interviewed.

It was felt by one interviewee that the New Pharmacy Contract in England and Wales would facilitate the pharmacist's involvement as part of the drug misuse team. The new contract has been in place since April 2005 and thus after the pharmacist interviews took place, so it is not possible to surmise whether this is the case. However, provision of needle exchange and the supervised consumption services have been deemed as 'Enhanced Services' under the terms of the new contract. As such, primary care organisations can opt to commission such services on the basis of local need and individual pharmacy contractors can choose whether or not provide them.

At the time that the pharmacist interviews took place, there was some discussion about the nature of the service specifications for drug misuse services and how they would be developed. More recently, it has become clear that service specifications for Enhanced Services have been developed using experience from locally negotiated services rather than from an assessment of the quality of such services with the views of service users and providers taken into account. For example, the service specification for supervised administration of prescribed medicines (included in Appendix Seven) suggests individual CPPE training packages such as 'Opiate treatment: Supporting pharmacists for improved patient care open learning' however, this differs from the suggestions made by service user interview participants who felt that a more practical approach was required.

5.2.4.3. Pharmacist Attitude

A negative attitude towards drug misusers and their treatment is likely to be a barrier to enhancing services. As discussed in section 5.2.2.2. on page 202, Matheson (1999) concluded that addressing these negative attitudes could encourage more pharmacists to provide services and enhance the process of service delivery.

Similarly, some pharmacists interviewed for this study suggested that a number of their colleagues had poor attitudes that prevented them from engaging in providing high quality services to drug misusers. Whilst the development of an individual's attitude to a topic is multi-factorial, it is likely that a wider understanding of substance misuse from the misuser's point of view may inform an individual's attitude in a positive way.

The positive correlation between knowledge and attitude performed in section 4.1.2.6. adds weight to this suggestion.

5.2.4.4. Sharing Information

Difficulties in sharing confidential client information were seen as a barrier to providing drug misuse services. The pharmacist interviewees described occasions when 'client confidentiality' was use as a reason for not divulging information that the pharmacist had deemed important to be aware of. Some pharmacists felt that they were 'kept out of the loop' when decisions about an individual's treatment had been made. Exactly what information should be shared between prescriber, drugs worker and pharmacist is the matter of some debate. However this needs to be addressed in order for pharmacy services to be developed.

The service user interviewees also had varying opinions on what confidential information they would be happy for the pharmacist to know. Some did not mind what information was shared, whilst others questioned the need for pharmacists to know any more about them than other non-drug misusing pharmacy customers.

As discussed in section 5.2.3.2. on page 215, the Department of Health document on confidential information sharing provides the framework for sharing confidential client information. However, in order to remain sensitive to the views of service users, one method of defining what information should be shared could be the development of a

set of questions that allows the individual service user to determine the level of information that is shared between the prescriber and pharmacist.

5.2.4.5. Summary of Objective Four

Providing support and recognising teamwork were identified as important facilitators in developing community pharmacy services to drug misusers whilst a poor pharmacist attitude and lack of two way information sharing between the pharmacist and other healthcare professionals involved in the drug misusers' care were identified as potential barriers to developing such services.

Providing relevant and adequate training in a multi-disciplinary setting was identified as the most important facilitator as it was recognised that a lack of training was a barrier to enhancing services.

5.2.5. Describe the views and experiences of service users of community pharmacy drug misuse services, and obtain their opinions of how services could be improved and developed

The views and experiences of service users in this study are similar to those service users interviewed in previous studies. (Sheridan and Barber, 1996, Matheson, 1998 and Neale, 1999)

In this study, services provided by community pharmacists include remunerated services such as needle exchange and supervised consumption and the 'ad hoc' service of advice provision.

5.2.5.1. Service Users views of Pharmacy Needle Exchange

In general, those interviewees who had used pharmacy based needle exchange were positive about the service. They recognised the need for such services to be available locally and felt that the pharmacy opening hours made clean injecting equipment more available than it would be from a specialist drug service.

Features of the service were discussed by some interviewees. Encouragingly, no one had experienced a limit on the number of syringes that they were permitted to take away if they did not bring back used ones. Whilst pharmacists encouraged returns, users did not appear to be penalised for failing to return syringes. This was a feature of at least one needle exchange of which the author has experience. However, with only one set of injecting equipment being available for every two injections administered (Parsons, 2002) it is perhaps understandable that some drug users may wish to keep used equipment in 'reserve' rather that run out completely.

Unfortunately, some interviewees had experienced their local pharmacy based needle exchanges closing down. Most felt that this was because the pharmacists did not want drug users to come into their pharmacies. Others described having to travel considerable distances to find a needle exchange.

Unsurprisingly, negative experiences of pharmacy needle exchange services were mainly due to lack of availability, both of needles and syringes but also of associated paraphernalia such as citric or ascorbic acid.

The use of acids to dissolve heroin is now regarded as a harm reduction strategy (Ponton, 2004) and following a recent change in the law permitting the provision or sale of citric acid and other injecting paraphernalia to injecting drug users it has been recommended that citric or ascorbic acid be incorporated into needle exchange packs in order to prevent the use of less suitable acids such as lemon juice and vinegar.
However, a recent survey of needle exchanges conducted by the NTA (NTA, 2006) revealed a disparity between pharmacy based schemes and those run by specialist drug services with only 44.4% of pharmacy schemes providing citric acid compared with 80.5% of 'specialist' schemes.

The report found that pharmacy schemes accounted for 80% of needle exchange services in England, but it is limited in its assessment of the quality of pharmacy based schemes due to the poor response rate from pharmacy needle exchange scheme co-ordinators (48%). This suggests that the NTA should focus on obtaining data directly from the providers of pharmacy needle exchange schemes in order to more accurately assess the quality of the schemes in respect of the provision of injecting paraphernalia as pharmacy based schemes represent the majority of needle exchanges, however it is recognised that this would be a major undertaking with over 10,000 community pharmacies in England.

The organisation of individual needle exchanges was commented upon by interviewees. Most were concerned with privacy surrounding the transactions. This is an importance consideration as some participants described the embarrassment of having to dispose of their sharps bin in front of other customers. Unfortunately, other interviewees had been asked to come back to the pharmacy at an alternative time as the pharmacist was at lunch. Both these points suggest that pharmacy based needle exchanges should consider the privacy of the client as well as ensuring that adequate numbers of staff are able to carry out needle exchange transaction in the absence of the pharmacist.

5.2.5.2. Service Users' Views of Supervised Consumption

Similarly to needle exchange, the local availability of the service was important to most of the interviewees, with those in more rural areas describing having to travel some distance to their drug clinic in order to receive their daily dose of methadone before their local pharmacies started to participate in the scheme.

Whilst locality was seen as a benefit to some, other felt that this was a disadvantage as they were more likely to come into contact with people e.g. neighbours, who they may not want to know that they are on a methadone prescription. This was especially the case in pharmacies were there was little privacy for the client to consume their dose of methadone. Others explained that coming into contact with certain other drug users were more likely to make them use. This was because they associated that individual with periods of time in their life when they used.

The service user interviewees pointed out some of the benefits of supervised consumption. The participants of this study gave similar reasons to those interviewed by Neale (1999) in that supervised consumption prevented the abuse of the substitute prescribing system.

However, in contrast to Neale's findings, supervised consumption was seen by most as a negative condition of substitute prescribing principally because of the lack of privacy in the pharmacy.

Neale suggests that there may be scope for increasing the level of supervision, but that this should not be a blanket condition applied indiscriminately. However, in some areas, interviewees in this study described that everyone who received methadone from their pharmacy was supervised irrespective of how long they had been on a prescription. This finding suggests that guidelines for supervision of consumption published by the Department of Health and the ACMD may have been overlooked by some local drug agencies. The rational for supervised consumption should be considered by individual agencies to ensure that it is appropriate and not applied in a 'blanket' fashion.

Individual interviewees commented on the length of time that they had been supervised and the effect that this had on their lives. Effectively, being supervised meant that they were 'tied' to the pharmacy and the local area with trips away difficult to organise.

Problems associated with supervised consumption were described by some clients. They recognised that pharmacists were sometimes put in a difficult position when a client presented intoxicated. Most understood the need for the pharmacist to withhold methadone doses under these circumstances but recognised that this may be difficult to do if a client became aggressive.

5.2.5.3. Service Users' views of Advice from Pharmacists

The results clearly indicate that the interviewees were more likely to ask advice about general health matters than about aspects of their drug misuse. Previous studies have suggested that drug misusing clients of community pharmacies would like to see leaflets on aspects of drug misuse on display in pharmacies and regarded the pharmacist as a potential source of advice. (Sheridan, 1996)

The postal questionnaire conducted in part one of the research reported here suggests few pharmacists provided leaflets on drug misuse and methadone to drug misusing clients, and that the majority of respondents to the postal questionnaire never gave out leaflets concerning HIV prevention to new drug misusing clients. Therefore it is possible that the lack of availability of advice leaflets of drug misuse coupled with the service users' reticence to ask advice on aspects of their drug misuse means that whilst the pharmacy is regarded as a source of advice, in practice it is neither being provided nor sought.

5.2.5.4. Service Users' Views of Pharmacy Service Development

The interviewees discussed their views on the extension of prescribing rights to include pharmacists. This makes it possible for opioid substitute medication to be made available through prescribers other than doctors.

Whilst several participants had reservations, most recognised that allowing pharmacists to prescribe would make drug treatment more widely available. In some areas where reported waiting times were in excess of 14 months this was seen as a significant development.

Some participants felt that getting methadone prescribed by a pharmacist would be 'too easy' and open to abuse. The potential organisation of opioid substitution prescribing service conducted by pharmacist was not discussed with the interviewees. This is because the author was not aware of any such schemes at the time of interview.

It is suspected that the reservations of the interviewees were based on the assumption that an individual would be able to get opioid substitution medication in a manner similar to other pharmacy 'P' medicines, from a local community pharmacy. The interviewees felt that pharmacists would not have access to urine testing that could help to ensure compliance with the programme. The participants recognised that their drugs workers and doctors worked together, often in the same clinic, to ensure that prescribing was appropriate and safe. In comparison they recognised that pharmacists were often based away from the surgery or clinic and would not have access to the

same level of support. It is suspected that, for this reason, interviewees felt that pharmacists could have a role to play in prescribing in maintenance treatment to those who were established on an opioid substitute rather than initiating new clients on to a substitute prescription.

Maintenance prescribing by pharmacists has the potential to benefit access to treatment services whereby clients are initiated on medication at a drug clinic or general practice and then transferred to a pharmacist once maintenance prescribing had been established. This model would require a clear treatment plan that defines when and for how long prescribing is the responsibility of the pharmacist.

In order to ensure that a new model of prescribing is safe, clear communication pathways between pharmacist prescriber and GP or drug clinic must be defined and established. The service users should be part of the consultation about what information is shared between members of the drug treatment team.

The service users who participated in the interviews conducted in this research had clear views on the level of confidential information that is shared between the pharmacist and doctor or drugs worker. Most felt that that the pharmacist did not need to know anymore about them than any other patient. This was because they saw the pharmacist as a supplier of their medication rather than being more explicitly involved in their care, for example, by prescribing substitute medication.

Pharmacists who act as prescribers are likely to need more information about an individual client than those who dispense. This level of confidential information sharing should be discussed with the client before alternative prescribing arrangements are made.

5.2.5.5. Summary of Objective Five

Service user interview participants were generally positive about the type of services that they received from community pharmacies. The convenience of a pharmacy local to home was important to most service users, especially where they had had previous experience of travelling some distance to obtain injecting equipment or to get their daily dose of methadone. Some participants described asking the pharmacist for advice about minor illnesses and recognised that the pharmacist was an source of advice on such matters. They were less likely to ask advice on aspects of their drug misuse, for example safer injecting. Most said that they would feel embarrassed to do so, whilst other recognised that they had alternative sources of advice in this area.

The suggestion of pharmacist prescribing of substitute medication received a mixed response. Some participants recognised that this model of prescribing would increase the availability of substitute medication. Others participants were less positive, questioning the level of training that the pharmacist possessed. However, most felt that there was a role for pharmacist prescribing in maintenance situations.

5.3. METHODOLOGICAL CONSIDERATIONS

This study was conducted in three parts and used two methods of data collection in order to fulfil the objectives of the study which were summarised in section 2.11. on page 71.

Each part of the study will be discussed in turn in order that the appropriateness of each method can be assessed and reviewed. In this section methodological comparisons with other studies will also be made.

5.3.1. Community Pharmacy Postal Survey

5.3.1.1. Appropriateness of the Method

The questionnaire allowed current levels of service provision to drug misusers from community pharmacies in the South West of England to be ascertained and to gauge the attitudes of these pharmacies to drug misusers and their role in providing services allowing objectives one and two to be fulfilled.

This method of obtaining data on service provision and attitude was considered to be the most practical and cost-effective way of getting information from a large population.

Bryman (2001) states that the self-completion questionnaire and the structured interview are very similar methods of social research, however it can be argued that

this depends on the content of the questionnaire. For example, it would have been difficult to obtain numbers of methadone prescriptions in a structured interview without interrupting the interview as it is likely that the participant will have to examine the methadone prescriptions in order to provide the data required.

A structured interview has more 'context' which can influence the responder, for example interviewer personality, style and manner of questioning. This is especially important when obtaining data on attitudes which may be influenced by the rapport (or lack of) built between the interviewer and interviewee during the course of administering the questionnaire. In comparison, a postal questionnaire that can be answered at the respondent's leisure removes the 'personal influence' of the interviewer.

In this case, the advantages of a self-completion postal questionnaire, that is; relative in expense when compared to other methods, ease of administration for a single person research project and convenience for the respondents, were considered to outweigh the potential disadvantages of this method which could include potential confusion on the part of the respondent and the lack of opportunity of the researcher to prompt or help the respondent with an answer. The questionnaire used in this survey concentrated on obtaining quantitative information, whilst some qualitative 'free response' questions were asked, these were used mainly to inform the next stage of the research.

5.3.1.2. Data Collection

Use of pilot questionnaire

A pilot was used in order to test the layout and ease of understanding of the developed questionnaire as well as to predict the level of response that may be expected in the survey population. The pilot questionnaire were filled in as was anticipated by the researcher, however the response rate (32%) after three mailings was lower than was predicted from previous postal surveys of community pharmacies (Sheridan (1996) – 74.8% and Matheson (1999 and 2002) – 79.1% and 83.4% respectively).

As the questionnaire was developed using Matheson (1999) as a template, it was surprising that the resulting questionnaire performed poorly in the pilot with regard to response rate. With hindsight, the use of Berkshire as the pilot area was potentially biased. The 4-way agreement (Walker, 2001) was developed in Berkshire and for this reason Berkshire was chosen as the pilot area. However, the existence of the 4-way agreement in Berkshire does not reflect the 'typical' situation in the South West of England where the use of a 4-way agreement is varied.

The poor response rate from the pilot survey may have reflected a degree of 'drug user survey fatigue' amongst these pharmacies as a result of the 4-way agreement development and subsequent validation. It may have been more appropriate to pilot the questionnaire on the population to be surveyed (i.e. the South West of England) to more accurately assess the response rate that could be expected.

Following telephone interviews with pilot non-responders where it was revealed that 50% (n=13) felt that they did not have enough time in their working day to fill in the questionnaire, it was decided to develop a much shorter version of the questionnaire in order to maximise the data obtained on level of service activity at the expense of obtaining data on knowledge and attitude.

Length of the questionnaire

Response rates suggest that the length of the questionnaire have had an influence on response. Referring to Table Six on page 102, it can be seen that the last mailing of the full version of the questionnaire resulted in an increase in response rate of 9%. The subsequent mailing of the shortened version of the questionnaire resulted in an increase in response of 18% indicating that pharmacists were more likely to fill in a shorter version of the questionnaire. This finding is an important learning for future research that involves administering questionnaires in order to maximise response.

Judging the length of a questionnaire to maximise both response and richness of data collection is challenging, and whilst the shortened version lacked information on the demographic details of the respondent, it allowed information on service provision to be obtained from pharmacies that had not replied to the full version. This is shown by the response from a further 18% (n=162) of pharmacies.

The benefit of increasing response rate by using two versions of the questionnaire presented a challenge when analysing the data. It was important to be clear which

sections of the analysis referred to the responses obtained from both versions (78%, n=707) and those from the original length version (60%, n=545) when interpreting the results of the questionnaire.

Non-responders

A response to the questionnaire was not received from 21.7% (n=196) pharmacies. In Dorset and Somerset StHA non-responders accounted for 26.0% (n=57) of pharmacies. Whilst in Avon, Gloucestershire and Wiltshire, and South West Peninsula StHAs non response rates were similar, 20.3% (n=78) and 20.2% (n=61) respectively. Non-responders were not followed up, so it was not possible to discuss the characteristics of non-responders to this questionnaire.

As no data were obtained on those pharmacists who chose not to respond to the questionnaire it is not possible to assume that they would have responded in a similar manner to those who did respond. Sheridan and Strang (1998) examined the significance of late or non-response to their 1995 survey on drug misuse services provided by community pharmacists. They found that late or non-responders were significantly different from those who did respond in terms of the extent of their service involvement.

Non-response bias should therefore be considered when interpreting the results of this questionnaire since pharmacists who are highly motivated and involved in providing services may be more likely to respond that those who are have a negative attitude to

drug misusers (Matheson, 1999). Therefore the 196 pharmacists from whom data was not gathered may have more negative attitude and be less involved in service provision.

Examination of the data provided by the 2003 Pharmacy Workforce Census revealed that Dorset and Somerset StHA is home to a higher proportion of locums than the national average, (36% compared with 28% nationally). Locum pharmacists may not feel able or willing to fill out a questionnaire that relates to a specific pharmacy and this may reflect the slightly lower response from pharmacies in Dorset and Somerset (Table Six, page 102).

In order to 'correct' the results for non-response, a telephone interview could have been carried out on the remaining 196 non-responders. This was deemed too costly and time-consuming to perform at the time. Therefore acknowledgement is given to the problems in generalising these results to the whole population of community pharmacists in the South West of England. The objective of providing information on service provision have been met by ensuring that a good response rate (77.8%) was achieved as it is acknowledged that the higher the response rate, the lower the potential bias due to non-response (Sheridan, 1998).

Demography of Respondents

Respondents were similar in terms of demographic information to those who responded to Matheson's 2000 survey of Scottish pharmacists (Matheson, 2002) and allows for comparison to be made between the two groups.

A comparison of demographic information was not possible with the work of Sheridan (1996) as they did not report the demographic information of their respondents. We cannot, therefore, assume that the two groups of respondents are similar.

5.3.1.3. The 'Knowledge' section

This section was designed to test pharmacists' knowledge on aspects of drug misuse and treatment of opiate dependence. The testing of pharmacists' knowledge in this manner has not been attempted by authors of previously conducted surveys of community pharmacists and as such no comparisons between surveys can be made.

The 'correct' answers were determined by the author using her own professional knowledge of drug misuse and treatment of dependence and from reference to texts. However, the confidence in the findings of this part of the survey is limited by the lack of external validation of the answers. The findings would have been more robust had the answers to the questions posed had been validated using answers from an expert panel. Using a panel in this way would help to gain consensus should differing opinions arise on the 'correct' answer.

For example in the analysis of the answers to question 30, (when supervising consumption of Subutex (buprenorphine) how long does it take for the full dose to be absorbed from the mouth?) it is apparent that there is a spread of opinion as to the correct answer (see Table 19 on page 115). The 'correct' answer may be considered to be unclear, as the manufacturers of Subutex were unable to provide the author with

buccal absorption data. In the absence of such data, the views of an 'expert panel' could have provided a consensus which could then have been compared with the responses of the pharmacists who answered the questionnaire.

5.3.1.4. The Attitude Scale

Reliability and Validity of the Attitude Scale

The attitude scale used in the questionnaire was similar to that used by Matheson (1999) who demonstrated the scale to be reliable; that is that it would yield the same results if it were to be repeated in the same population and valid; that is that it measured what it is supposed to be measuring.

The reliability of the attitude scale reported here was tested by computing Cronbach's alpha coefficient for the scale. At 0.813 the coefficient compared well with that of Matheson (1999) at 0.92 and was above the 0.80 quoted by Bryman (2001) as the figure typically employed as a rule of thumb to denote an acceptable level of internal reliability.

The validity of the scale was assessed in two ways. Firstly, the construct validity of the questionnaire was assessed by looking at how responses to two attitude statements (questions 57 and 58) compared with respondents responses to questions about the drug misuse services that they provided. Examination of these responses revealed good construct validity as 90% of those pharmacists who provided a supervised methadone consumption service disagreed with question 57, *'I believe that I would never supervise*

the consumption of Controlled Drugs by drug misusers on my pharmacy premises.' Similarly, 68% of pharmacists who provided a needle exchange scheme agreed with question 58, *'I believe the community pharmacy is an appropriate place for a needle exchange scheme.'*

Secondly, the psychometric validity of the attitude scale was determined using factor analysis. The process of factor analysis takes a large set of variables (in this case the attitude statements) and looks for groups among the inter-correlations of the set.

Determining the number of factors that best describes the underlying relationship among the attitude statements is done by looking at two results of the analysis. Firstly, Kaiser's criterion suggests that only factors with an eigenvalue of 1.0 or over are retained. In the factor analysis presented here, nine factors with an eigenvalue over 1.0 were found to exist. This was felt to be too many to describe with clarity. Kaiser's criterion has been criticised however, as resulting in the retention of too many factors in some situations (Bryman, 2001). It was felt that this factor analysis was one such occasion. Secondly, one can examine Catell's scree plot. Catell recommends plotting each of the eigenvalues of the factors and finding the point at which the shape of the curve changes direction and becomes horizontal. The factors that occur before the change in direction are then retained for subsequesnt interpretation. Examination of the scree plot for the attitude scale in this study revealed the existence of five factors that occurred before the change in direction of the plot. Thus five factors were retained for

the subsequent analysis and were interpreted as described in section 4.1.6.3. on page 121.

The factor analysis confirmed that the scale was measuring different attitudes (i) towards drug misusers themselves, (ii) the effect on the community, (iii) the services provided and (iv) advice and support but all on a similar theme, that of drug misuse.

Normality of the attitude scale

A graph of number of respondents versus attitude score revealed a normal distribution (Figure Four, page 119). Because of this parametric statistics were used to relate attitude to demographic details, service provision and knowledge.

5.3.1.5. Comparison with Other Studies

Tentative comparisons with other surveys of community pharmacists have been made in section 5.2.1. above. However there are methodological differences between the previous studies and the work reported in this thesis and these are now further discussed.

Both Sheridan (1996) and Glanz (1989) conducted a 1 in 4 survey of community pharmacies in England and Wales whilst the study reported here used the population of community pharmacies in the South West of England.

As earlier surveys used a sample comprising only 25% of the population, there has to be an element of caution in assuming that their findings can therefore be regarded as national statistics. Additionally, their data was not reported by region, so it is unknown whether the South West was similar to or different from the rest of the sample. The South West is made up of large urban, small urban, suburban, small town and rural areas with a diverse urban population. English national drug policy and funding systems apply, as do national pharmaceutical practice guidance, so there is no evidence to suggest that the South West would be significantly different from a national average although it is making an assumption to say that it would not. The author of the 1995 survey of community pharmacies was approached for regional data but this was not made available.

Therefore, in the absence of more certain historic data for England, tentative comparisons have been made between this study and those of Sheridan and Glanz.

Surveys of Scottish pharmacies conducted by Matheson et al (1999, 2002) surveyed all Scottish pharmacies rather than a 25% sample. This allows more confidence in their findings and a more robust comparison can be made with the results of the current study due to the similar methodologies employed.

5.3.2. Semi-Structured Interviews with Community Pharmacists

5.3.2.1. Appropriateness of the Method

The aim of this part of the study was to understand pharmacists' experiences of providing services to drug misusers. In addition the participant's views on the role of pharmacists in the treatment of drug misuse, and their views on potential barriers and opportunities to the development of services were elicited in order to further explore the data obtained in the quantitative data obtained from the questionnaire.

This study was qualitative in nature and used Interpretative Phenomenological Analysis (IPA) to help interpret the differing experiences of the interview participants. A discussion of this analytical method and the differences between IPA and Grounded Theory can be found in section 3.1.2.1. on page 79.

The semi-structured interview was chosen as the data collection tool because it has the benefit of allowing personal views and experiences to be described in an environment where they will not be challenged by others and allows detailed descriptive data to be gathered which were needed in order to perform the analysis.

The interview schedule was developed from analysis of responses to the free-response questions in the postal questionnaire. In this way, the results of the postal questionnaire have informed the next stage of the research and ensured that the pieces of work are not mutually exclusive. A pilot interview allowed the schedule to be tested, and evaluate the interviewee's comprehension of the questions.

Thirty-one interviews were conducted with pharmacists. However, after fifteen of the transcripts had been analysed, it was felt that no new themes were emerging from the data and following consultation with a researcher with considerable experience of IPA it was decided not to analyse the remaining 16 transcripts as the view was taken that data saturation had been reached.

It was subsequently recognised that careful planning and analysis of the interviews as they occurred could have prevented interviews that were not required for the analysis from being conducted. It is intended that in future research projects of this nature, further interviews will only be arranged once initial interviews have been analysed and a need for more qualitative data has been established.

In order to use the data obtained from the remaining 16 transcripts that were not included in the IPA analysis, further work could involve a deviant case analysis of these transcripts.

5.3.2.2. Recruitment and Selection of Participants

Participants were recruited on the basis of their indication of willingness to participate in further research following their responses to the postal questionnaire. The reason for individuals' decision to participate (or not to participate) is unknown. It is possible to examine whether the attitude score of the interview participants varied from the rest of the respondents to the postal questionnaire. A one-sided T-Test revealed a significant

difference between the two groups [*p=0.000]*. Table 35 summarises the differences in mean attitude score.

Attitude Score	**Mean**	**Standard Deviation**
All questionnaire respondents	11.3	12.3
Interview Participants	15.4	11.9

Table 35: ***Difference in mean attitude scores between Interview Participants and all questionnaire respondents***

It can be concluded from this comparison that those respondents with a more positive attitude score were more likely to agree to be interviewed. Potential bias is therefore introduced because the candidates for the interviews were self-selecting. Whilst this bias is noted, it was not deemed to be a limitation of the study since by the nature of the method and in order to demonstrate good practice research and to obtain ethical approval for the study; participants must be able to demonstrate willingness to participate, and capacity to give written consent to the interview being recorded. If they were not truly willing then it could be argued that they were coerced into taking part which is clearly at odds with a sound ethical study.

It is also possible that those respondents to the postal questionnaire were positively selected as candidates for interview because letters inviting individuals to be interviewed were sent out in the order that responses to the postal questionnaire were received, so that those who responded to the initial mail-out were invited to be interviewed first. In order to prevent this potential bias in future work, letters inviting

potential interviewees to participate could be sent out at the conclusion of the questionnaire so that respondents to earlier mailing are not positively selected for.

Previous research (Sheridan, 1998) has shown that the level of service provision to drug misusers varied according to the wave of mailing to which the individual responded, with those providing services tending to respond earlier than those who did not. Applying these findings to the study reported here, it could be argued that the recruitment methods employed have positively selected for those pharmacists who do provide services to drug misusers and interviewing pharmacists with a more positive attitude than the whole population (of pharmacists in the south west of England) may have resulted in an unrepresentative view of the services provided to drug misusers and how they could be developed. However, the purpose of this study was not to provide a representative qualitative assessment of the views of pharmacists who provide drug misuse services, but rather to examine how these services could be developed. Because of this, interviewing pharmacists with a negative attitude to drug misuse service provision, whilst difficult in terms of recruitment may also have resulted in a lack of new thinking in the area because of a poorer attitude to existing services.

Whilst recognised, it was not felt to be a limitation of the study since the objectives of the research are centred on those who provide services rather than those who do not.

There were many more pharmacists willing to participate further than were needed for the interviews. Therefore, a purposive sample was selected from the initial set of

volunteers. This selection was carried out on the basis of the location of the participants so that pharmacists from various geographical locations across the South West of England were chosen to be interviewed. As this was a purposive sample, potential bias is again introduced because the researcher selected the final list of interviewees.

5.3.2.3. Reliability of the Findings

The semi-structured interview, as with other self-report methods of research relies on the respondent being able to give accurate and complete answers to the questions posed. This may depend on how the questions are structured, and how the respondent interprets the meaning of the question. In order to facilitate the gathering of data in this study the interview consisted of a series of questions in the form of a topic guide.

This allowed the researcher to vary the sequence of questioning and gave some latitude to ask further questions in response in order to explore topics that arose in more depth. Where incomplete answers were felt to have been given by the respondent, the researcher had a number of prompting questions in order to illicit the maximum amount of data from an individual question.

The interview was carried out at the participant's place of work, most often during a lunch break. It was not always possible to arrange this, and therefore it is acknowledged that the interviewee may have been distracted from the interview in order to perform tasks associated with their role, for example, checking prescriptions or counselling patients. During the interview the researcher assessed how much the

interviewee had been distracted by other tasks, however, it was felt that none of the interviews were significantly affected by interruption.

The interpretation and reliability of the findings assume that the participant answered the questions by drawing on experiences that they have had as a result of providing services to drug misusers. Thus, a recent 'bad experience' with a drug misuser may affect the overall 'tone' of the interview and the subsequent views and opinions of the participant. No assessment was made of the reliability of the individual interviews. One way of assessing this would have been to send the interviewee a transcript of the interview and ask them to comment on the tone and answers given. This may have uncovered interviews which were negatively biased because of a recent negative experience. However, asking an interviewee to comment on the tone of an interview may lead them to retract part or the entire interview on the basis that they do not like how they sound adding further bias to the analysis. (Silverman, 2000)

5.3.3. Semi-Structured Interviews with Service Users

Services users of healthcare in the United Kingdom are viewed as stakeholders in the comment on and development of new clinical guidelines by the National Institute of Health and Clinical Excellence (NICE) and the organisation has committed itself to involving the patients, carers and the public in the development of new guidelines. The views of users of a service are important when considering how services can be improved in order to ensure that improvements are relevant and acceptable to the patients who may benefit from them.

In the context of this research, therefore, it was felt vital to ascertain the views of the service users on the care they currently receive and to gain their insight into how pharmacy service to opioid dependent individuals could be improved and extended.

5.3.3.1. Appropriateness of the Method

The semi-structured interview was again considered to be the most appropriate way to collect data in order to understand the views and experiences of drug misusing service users of community pharmacies. Consideration of alternative methods of data collection and analysis are discussed in section 3.1.2.1 on page 83.

The interview schedule was developed following the analysis of the pharmacist interviews. This allowed service user interview participants to comment on the pharmacists' suggestions for development of community pharmacy drug misuse services. A link between the first two stages of the research is therefore maintained

5.3.3.2. Recruitment of Participants

Service users were recruited from four pharmacies who had responded to the postal questionnaire and whose pharmacists had been interviewed for stage two of the research. Obtaining agreement from the pharmacists to conduct interviews with their service users was facilitated because the pharmacists had previous knowledge of the research and the researcher. The pharmacies were selected based on their differing geographical location in the south west of England (Bristol (inner city), Bournemouth (council estate), Swindon (suburban) and Torquay (tourist destination).

Considerable thought was applied to *how* the service user interviewees were to be recruited. It was acknowledged that service users may have felt obliged to take part if the pharmacists themselves had carried out the recruitment. For this reason, pharmacists were asked to hand out information leaflets about the study the day before the researcher attended the pharmacy to conduct the interviews. Recruitment and consent to be interviewed was then carried out by the researcher on the day scheduled for the interviews to take place. In practice, some service users actively indicated to the pharmacist that they were willing to be interviewed. In these cases 'appointments' for the following day were made. Five of the 15 interviewees were recruited in this way. It was reiterated to these interviewees that the content of the interview would not be discussed with the pharmacist and would not influence future prescriptions from the pharmacy.

Following learnings made from the pharmacist interviews, fewer interviews (15) were conducted with service users than took place with the pharmacists. This resulted in all of the transcriptions being included in the analysis. It was noted however, that few 'new' themes emerged from the service users after 14 interviews had been analysed.

This demonstrates that it is difficult to ascertain how many interviews to conduct in advance, in order to ensure that no new themes emerge from subsequent interviews. This could be overcome by analysing the content of the transcriptions as the interviews are conducted and only then arranging more interviews if new themes were still

emerging from the data. In practice this was difficult to achieve within the design of this study.

5.3.3.3. Reliability of the Findings

The reliability of the findings drawn from the service user interviews rely on the interviewee being able to give full and honest answers to the questions posed, in a manner similar to the interviews conducted with the pharmacists. Similarly, recent bad experiences of a pharmacy may have resulted in an overtly negative interview.

An additional factor associated with the service user interviews is the location that the interview took place. In all cases the interviews were carried out within the pharmacy from which they obtained methadone or injecting equipment. As the participants were asked to evaluate services that they received from the pharmacy, they may have felt obliged to give positive responses, because of concern that a negative response may affect their relationship with the pharmacist and staff. Concerns of this nature were addressed by ensuring that the interviewee was aware of the confidential nature of the study and by using a room in which pharmacy staff could not overhear the interview.

Previous studies with drug misusing clients (Arnsel, 1976) have suggested that this group of people give reliable and truthful answers to questions asked of them in a research context if there is no perceived adverse consequence or gain. There was no evidence that the group of service users interviewed from this study were any different.

In practice, many of the participants described 'negative' experiences of the pharmacy, but encouragingly most went on to describe how these 'negatives' had been overcome.

5.3.4. Final Methodological Comment

The methods employed to fulfil the objectives of the study produced data that confidently allowed the current level of service provision in the South West of England to be ascertained, and an assessment of the knowledge and attitudes of pharmacists who provide these services to be made.

The use of both quantitative and qualitative methodologies enabled the researcher to examine and explain the findings of the objectives in a more rounded manner than would have been possible with the use of solely quantitative data.

The use of the postal questionnaire to collect data on service provision allowed some comparisons to be made with previous surveys; however methodological differences have been acknowledged and therefore comparisons have been made in terms of trends in data rather than absolutes.

The use of semi-structured interviews with pharmacists and service users resulted in a rich data set which allowed the researcher to describe the views and experiences of both groups using Interpretative Phenomenological Analysis.

Chapter Six

CONCLUSIONS

CONTENTS

6.1. COMMUNITY PHARMACY INVOLVEMENT IN THE CARE OF DRUG MISUSERS

This research has updated and added to the literature on the level of community pharmacy involvement in the care of drug misusers in the following ways.

6.1.1. Dispensing Controlled Drugs for the Treatment of Dependence

The level of community pharmacy service provision to drug misusers in the South West of England has been quantified with a reasonable level of confidence. Data was obtained from 707/903 pharmacies in the South West, a response rate of 78%.

The postal survey of community pharmacies in the South West of England has suggested that more pharmacies are now dispensing controlled drugs for the treatment of dependence than were doing so in the whole of England following the last survey which was carried out in 1995, although caution with these comparisons is needed for reasons discussed in section 5.3.1.5.

The number of pharmacies that provide a supervised consumption service and the level of supervised consumption of methadone have been quantified in the South West for the first time with rates of supervised consumption showing regional variation, with lower levels in Dorset and Somerset possibly due to the more rural nature of these counties.

Comparison of the data with that from surveys of Scottish pharmacies suggests that while more pharmacies in the south west provide a supervised consumption service, more Scottish drug misusers are receiving their methadone by supervised consumption showing that a greater level of service activity is undertaken by fewer pharmacies in Scotland.

6.1.2. Supply of Clean Injecting Equipment

The results of the postal questionnaire have allowed quantification of the extent of needle and syringe selling activity and provision of needle exchange services by community pharmacies in the South West of England.

Tentative comparisons with Sheridan's 1995 survey suggest that the level of needle exchange provision from community pharmacies in the south west has fallen since 1995. This is coupled with a decline in the number of pharmacies who were prepared to sell clean injecting equipment to drug misusers, and those who were prepared to sell but had not received any requests in the week before the questionnaire was completed.

These results raise concern about the overall availability of sterile injecting equipment through community pharmacies and suggest that urgent work is required to increase this availability in the light of rising levels of HCV infection amongst injecting drug users.

6.1.3. Pharmacists' Knowledge and Attitude on aspects of Drug Misuse

The level of knowledge of pharmacists who responded to the postal questionnaire varied, with those provided a needle exchange scheme having a significantly higher knowledge score than those who did not.

Importantly, whilst attitudes towards drug misusers and their treatment varied, those pharmacists who provided drug misuse services had significantly higher attitude scores than those who did not provide services, confirming the link made by Matheson in 1999.

In addition to this finding, a positive correlation between attitude and knowledge was found to exist. This is the first time that such a link has been demonstrated and reiterates the importance of training in influencing attitudes towards drug misusers.

6.2. DEVELOPING COMMUNITY PHARMACY SERVICES TO DRUG MISUSERS

Qualitative, semi-structured interviews with community pharmacists and service users revealed multi-dimensional experiences associated with providing drug misuse services (pharmacists) and using such services (service users). Important barriers and opportunities to developing services were identified as a result of the analysis of the interviews.

6.2.1. Information Sharing

A difficulty in sharing information about clients was perceived as a barrier to providing drug misuse services.

Crucially, participants' experience of communication with drug treatment services varied with many suggesting that there was a lack of communication on the part of the drug services. This was often discussed in the context of confidentiality with some participants suggesting that confidential client information that they regarded as having an impact on the standard of care that they provided, was withheld from the pharmacists.

Service users recognised that certain information needed to be shared between their GP/ drugs worker and the pharmacist, and whilst some were happy for information to be freely shared between healthcare professionals involved in their care, others

questioned why pharmacists needed to know more than the information that a prescription would provide.

In some areas where an 'agreement' between pharmacist, drug worker, GP and client existed it was perceived that this helped to define the role of each individual in the treatment of the client, however, the use of this agreement as a form of role clarification was not universal.

6.2.2. Support to Provide Services

The perception of the level and quality of support that participants received in order to provide drug misuse services varied with *support* being defined as communication, remuneration and training.

Interestingly, participants who were actively engaged with the drug treatment services were critical of pharmacists who complained that there was a lack of support. These pharmacists were all similar in that they had actively sought support in order to provide drug misuse services, and were all interested in the subject of drug misuse.

Whilst interest in providing drug misuse services is likely to be a motivator in actively seeking support, there must also be support mechanisms in place for those who are more passive in their support seeking.

6.2.3. Training and Attitude

The importance of training pharmacists to provide drug misuse services is underpinned by the link between training and level of service provision first defined by Matheson (1999) and the link between knowledge, service provision and attitude demonstrated as a result of the work presented in this thesis.

Providing adequate and relevant training to pharmacists who provide services was discussed by both pharmacist and service user interviewees. Pharmacists felt that drug misuse training should include an understanding of the evidence behind the treatment of drug misuse and a clarification of their role within the drug misuse team, whilst service users felt that pharmacists should have an understanding of the impact on drug misuse on the life of the user in order to raise the pharmacists' awareness of the issues and problems faced by people who misuse drugs.

Service users tended to view pharmacists as 'dispensers of medication' rather than as potential experts in the field of drug misuse. Service user participants recognised that pharmacists were a source of general healthcare advice, but seemed less confident in asking advice about aspects of their drug misuse. Similarly, when asked about their views of pharmacist prescribing, many recognised the benefits in terms of increasing the availability of substitute medication; however, this was tempered by concern about the level of the pharmacist's knowledge and the impact of this on the safety of methadone prescribing.

In view of this, training that is seen as relevant by both pharmacists and service users is vital in ensuring that new services such as pharmacist prescribing of substitute medication is accepted as a viable and safe alternative to traditional prescribing methods.

6.3. METHODOLOGICAL LEARNINGS

Both quantitative and qualitative methods were used to explore the objectives of this thesis and were felt to have been relevant in producing the results on which the discussions of the objectives are based.

Methodological learnings were made during the course of the research and these are summarised below.

6.3.1. Quantitative Postal Questionnaire

Two versions of the postal questionnaire were used in order to maximise the response rate of pharmacies included in the research. The use of an abridged version in the forth mailing of the questionnaire was successful in increasing the response rate from 60% to 78% overall. The abridged version was designed to ensure that maximum data on the extent of drug misuse service provision was obtained; however the use of two versions of the questionnaire resulted in challenges when the data were subsequently analysed and interpreted. It was important to ensure that it was clear whether the results had been obtained from analysis of the first three mailings or from all four mailings.

The questionnaire attempted to test the level of pharmacists' knowledge on aspects of drug misuse and revealed a range of knowledge levels among respondents. The interpretation of these results would have had greater relevance if the questions designed to test knowledge had been tested on pharmacist 'experts' in the field of drug

misuse in order to provide consensus on questions with a range of correct answers and to provide a baseline on which to compare the data from the respondents.

6.3.2. Qualitative Semi-Structured Interviews

Thirty-one interviews were conducted with pharmacists. However, when the transcripts of these interviews were analysed, it was clear that the themes resulting from the interviews had been saturated after 15 transcripts were included in the analysis. The remaining 16 transcripts were therefore not included.

It is acknowledged that had the transcripts been analysed as the research progressed it may have been possible to avoid conducting interviews which did not add to the development of resulting themes.

6.4. THE PLACE OF THE RESEARCH

Since the start of this research in 2003, there have been a number of developments with regard to the place of pharmacy in the treatment of drug misuse. These will be considered in terms of the context of this research.

6.4.1. Updated Model of Care

In July 2006, the NTA published an update to the original Model of Care for Treatment of Adult Drug Misusers which was published in 2002.

The original document was criticised in section 1.3.4 for lacking specific information about pharmacy services to drug misusers and it's failure to recognise the pharmacist as part of the drug misuse team. However, the recent update goes some way to redressing this.

The update now recognises the pharmacist as a part of the multidisciplinary team in both the in- and out-patient treatment of drug misusers. The unique role of the pharmacist in the provision of needle syringe exchange schemes and supervised consumption is given attention with a recommendation that pharmacists providing 'extended' services such as interactive needle exchange and supervised consumption be trained to a suitable level of competence in line with the Drug and Alcohol National Occupational Standards (DANOS) competencies.

This recognition and subsequent training suggestions goes some way to addressing the concerns raised following the postal questionnaire and interviews with pharmacists who provide drug misuse services conducted as part of this thesis. Both these pieces of research highlighted the need for suitable training in order to provide drug misuse services. The interviews with pharmacists revealed that they often do not feel part of the drug misuse team and suggested that suitable training was the main way of providing them with support.

The unique property of the community pharmacy in its ability to provide open access healthcare to drug misusers is mentioned in the update. Access and availability was discussed by service users as the most beneficial property of services such as needle exchange and supervised consumption. Unfortunately, the update does not discuss strategies for increasing service such as needle exchange in pharmacies which appear to have possibly remained static since the last survey was carried out in 1995.

Non-medical supplementary prescribing by pharmacists is mentioned in the update. The recent extension of prescribing rights to include pharmacists has the potential to impact positively on the availability of substitute prescribing for those who wish to address their drug use in this manner. However, the interviews with service users in this thesis suggest that further work is required to increase the acceptability of this alternative to doctor prescribing. Interviewees recognised that pharmacist prescribing could increase the availability of methadone but were concerned with the safety of this alternative and the potential ease of abuse of pharmacist prescribing. It was suggested

that maintenance prescribing could be undertaken by pharmacists but that those new to treatment should continue to obtain methadone through doctor prescribing.

The updated Model of Care does not, however, refer to the non-medical 'holistic' role that several of the pharmacist interviewees in this study referred to when asked about the role that they played in the care of drug misusers. Similarly, a recent paper by Roberts and Hunter (2004) describing a system of pharmaceutical care in Glasgow pays close attention to reducing harm through the provision of needle exchange and supervised methadone consumption, but does not mention the social role that the pharmacist plays in the care of people who misuse drugs.

Both the NTA's updated Model of Care and Roberts and Hunter's description of pharmaceutical care for the dispensing and supervision of methadone follow Hepler and Strand's original definition that is discussed in section 2.7.1.

However, this definition does not describe the additional roles of providing needle exchange to drug misusers or the more holistic, social role described by the pharmacist interviewees that develops with the frequent visits of the client to the pharmacy. This social role which has so far been under described in the literature on pharmaceutical care of drug misusers, holds importance for both provider and service user and can positively impact on the care of the drug misuser through feedback to the key worker/ prescriber on the overall well being of the client.

The original definition of pharmaceutical care fails to address the importance of the patient's concerns and expectations (Barber, 2000). In the treatment of dependence, the expectations of the patient should be at the centre of any treatment plan in order to maximise the patient's compliance with the treatment regime. For example, imposing a detoxification regime onto a patient who is not ready to become drug free is likely to result in failure. Detoxification from opioids could be classified as an 'outcome' according to Hepler and Strand's definition, but unless it is an outcome with which the patient is in agreement, it is unlikely to succeed.

Barber's criticism of Hepler and Strand's definition (section 2.7.1.) holds true in the example of pharmaceutical care for drug misusers, as the non-medical social role focuses on the patient rather than the patient's disease.

The treatment and reduction of harm associated with opioid addiction has focussed on medical model of treatment through the prescribing of substitute medication. The interviews with pharmacists and service users for this study clearly show an additional, non-medical role for the pharmacists which is not described by Hepler and Strand's definition.

A new definition of pharmaceutical care for drug misusers is now proposed, which takes into account this newly described social role and the need for the individual patient's input.

"The provision of drug therapy, harm reduction measures and non-medical social care which takes into consideration the expectations of the client, in order to reduce drug related harm and improve the patient's quality of life."

6.4.2. Guide for Commissioners and Providers of Pharmacy Services

In February 2006, the NTA published the document entitled 'Best Practice Guidance for Commissioners and Providers of Pharmaceutical Services for Drug Users'. This was produced in conjunction with the Royal Pharmaceutical Society of Great Britain and the Pharmacy Misuse Advisory Group (PharMAG) which enables pharmacists with an interest in substance misuse to share ideas and best practice. It has been written by Marion Walker who is now employed by the NTA as a pharmacist on the clinical team and who was previously responsible for the development of the Berkshire 4-Way agreement.

The document provides a comprehensive guide to pharmacy services including needle exchange and supervised consumption both from the point of view of those who commission services and those who provide the services. It gives detailed service specifications for needle exchange and supervised consumption.

It describes pharmacy services to drug misusers in the context of the new pharmacy contract for England and Wales and describes both how pharmacists are paid for NHS services and potential issues with payment to pharmacies

Most importantly, the document serves to clarify the current and future roles of the pharmacist, including a description of the role of 'Pharmacist with Special Interest (PhwSI)' in drug misuse.

This publication answers the previous criticism of the NTA in underestimating the impact of pharmacy on drug treatment services. It is a comprehensive review of pharmacy service with an eye to the future role of the specialist pharmacist. It reinforces the vital role of the pharmacist within the drug misuse team which has been recognised by individuals with an interest in the area but not, until now in detail in official documents by the organisation responsible for drug treatment in England. It remains to be seen, however, how this document will impact on services on the ground.

6.4.3. Implications for Pharmacy Practice

The work presented in this thesis further demonstrates the clear need for community pharmacy to be actively involved in the care of drug misusers. There is a need for services to the expanded in order to meet the needs of the drug misusing population in terms of the availability of sterile injecting equipment.

There are opportunities for the pharmacy profession to develop its role as non-medical prescribers in the area of substance misuse, such development will enhance the service that the profession provides to the drug misusing population by increasing the availability of substitute medication and by providing an additional avenue of advice and support to those who wish to address their drug dependence.

Chapter Seven

RECOMMENDATIONS AND FUTURE WORK

CONTENTS

7.1. RECOMMENDATIONS

7.1.1. Increase the number of Pharmacy Based Needle Exchanges

The provision of a needle/ syringe exchange service through community pharmacies appears not to have increased since the last survey of community pharmacies was conducted. Participants who were not currently providing a needle exchange service commonly gave the reason that there was already a needle exchange available locally.

Analysis of the postal questionnaire conducted for this study suggested that pharmacists may be willing to provide services if an additional need were demonstrated and if adequate funding was available. Clearly, Parson's work (Parsons, 2002) strongly suggests additional need for clean injecting equipment and it should therefore be a priority of commissioning bodies to demonstrate this additional need in order to secure funding and increase the number of pharmacy based needle exchange outlets.

In addition, as the recent audit on needle exchange provision conducted by the NTA (NTA, 2006) suggested that the provision of injecting paraphernalia through community pharmacies was lower than through specialist drug services, commissioning bodies should review the content of needle exchange packs to ensure that there is an appropriate level of paraphernalia provision.

7.1.2. Review the level of Supervised Consumption in Individual Locations

The results of the postal questionnaire suggested a variation in the extent of supervised consumption of methadone across the South West. There are anecdotal reports of saturation of such services in individual locations and interviews with service users suggest that supervised consumption may be a blanket policy in some locations.

DAT's and local Shared Care Monitoring Groups should be encouraged to review the criteria for supervised consumption within their areas to ensure that local resources of this service are utilised appropriately.

7.1.3. Multi-disciplinary Group Training

Interviews with pharmacists have revealed the importance of training as a way of providing support. Those who had experienced face to face training sessions with other pharmacists and healthcare professionals involved in the care of drug misusers described forming both formal and informal support networks. Therefore, multi-disciplinary group training for healthcare professionals involved in the care of drug misusers should be a requirement of accreditation to provide drug misuse services. These training sessions should involve current service users whenever possible.

7.2. FUTURE WORK

7.2.1. Increasing the Availability of Injecting Equipment

As stated above, the analysis of the postal questionnaire has revealed an apparent reduction in the numbers of pharmacies providing needle and syringe exchange. This is coupled with an apparent reduction in the numbers of pharmacists in the South West of England who are prepared to sell clean injecting equipment. The reason for the reduction in 'willing sellers' is unknown, but may be related to a lack of disposal facilities.

In order to increase the availability of clean injecting equipment, further work should be conducted in order to examine whether providing community pharmacies with disposal facilities for used equipment increases selling activity.

7.2.2. Criteria for Supervising Consumption

Data obtained on the number of methadone clients who received their daily dose by supervised consumption revealed differences across the South West. Avon, Gloucestershire and Wiltshire had a higher incidence of supervised consumption than Dorset and Somerset; and the South West Peninsula Strategic Health Authority areas. The reason for this apparent difference is unknown and may be a result of chance.

However, interviews conducted with service users has revealed that in some locations, supervised consumption is a 'blanket policy' with some individuals reporting being supervised for several years despite being on a stable, maintenance dose of methadone.

This finding is concerning, and is at odds with guidance from the Department of Health and the ACMD which suggests supervised consumption for the first three to six months of treatment.

Further work should be conducted to understand the reasons why clients are supervised for longer periods of time and the criteria used to assess an individuals' suitability for 'take home' doses.

7.2.3. Provision and Availability of Leaflets

The results from the postal questionnaire suggest that the provision of leaflets by pharmacists on drug misuse and blood borne disease is limited. More pharmacists reported giving face to face advice on issues surrounding drug misuse than providing leaflets on the topic.

Whilst it is encouraging that face to face advice does occur, analysis of the interviews with service users suggest that many may not be willing to ask for advice about their drug misuse. In these cases, the availability of relevant leaflets on topics such as safer injecting and local treatment services represent a way of obtaining advice in an anonymous fashion.

Ways of improving leaflet provision in community pharmacies should therefore be researched, along with an assessment of the quality of such publications.

7.2.4. Pharmacists' Training

Adequate training of pharmacists involved in the care of drug misusers has been demonstrating as being a factor in promoting positive attitudes towards drug misusers and their treatment.

Pharmacist and service user interviewees had differing views of important topics to include in a training package however, both views should be considered when designing training for pharmacists and their staff.

The content of such training should be examined to ensure it is relevant to both pharmacists and drug misusers' expectations, and is up to date with the latest evidence in treatment.

7.2.5. The 'Pharmacist with Special Interest'

The Pharmacist with Special Interest (PhwSI) is defined as "Someone who supplements their core generalist role by delivering an additional, high-quality service to meet the needs of patients. Working principally in the community, they deliver a clinical service beyond the scope of their core professional role or may undertake advanced interventions not normally undertaken by their peers. They will have

demonstrated appropriate skills and competencies to deliver those services without direct supervision."

The recent NTA document 'Best practice guidance for commissioners and providers of pharmaceutical services for drug users' suggests that pharmacists who have completed Part 2 of the Royal College of General Practitioners certificate in the management of drug misuse in Primary Care are an untapped resource with whom commissioners and DATs should be encouraged to make contact. Such pharmacists may become PhwSI's within the framework published by the Department of Health.

The existence and roles of PhwSI's within the area of drug misuse should be examined to provide information on the impact of such pharmacists on drug treatment and pharmacy service provision in general.

7.2.6. Impact of NTA Document 'Best practice guidance for commissioners and providers of pharmaceutical services for drug users'

As described in 6.4.2 above, this document is a comprehensive guide to pharmacy services for drug misusers.

The impact of this document on local services should be assessed to ensure that the recommendations and standards contained within it are being followed in order to ensure high quality and standardised pharmaceutical care to drug misusers.

REFERENCES

1. Advisory Council on the Misuse of Drugs. *AIDS and Drug Misuse. Part 1.* London, HMSO. 1998.

2. Advisory Council on the Misuse of Drugs. *Reducing Drug Related Deaths.* London, HMSO. 2001.

3. Arnsel, Z. *Reliability and variability of self reported activities and drug use collected from narcotic addicts.* International Journal of the Addictions, 11 (2): 325-336. 1976.

4. Barber, N. *Pharmaceutical care and medicines management - Is there a difference?* Pharmacy World and Science, 23, 210-211. 2001

5. Bennett, M. *Benefits of Investment.* [Letter] Pharmaceutical Journal, 265, 161. 2000.

6. Berbatis, C., Sutherland, V. and Bulsara, M. *The services provided by community pharmacists to prevent, minimize and manage drug misuse: an international perspective.* In: Drug Misuse and Community Pharmacy – Edited by Sheridan, J. and Strang, J. London, Taylor and Francis. 2003.

7. Bonnet, N. *Pharmacy syringe exchange program for injecting drug users.* Presse Medicale, 35, 1811-1818. 2006.

8. Breakwell, G., Hammond, S. and Fife-Shaw, C. *Research Methods in Psychology.* London, Sage. 1995.

9. Bryman, A. *Social Research Methods.* Oxford, Oxford University Press. 2001.

10. Crabbe, A. *Where are we going?* [Letter] Pharmaceutical Journal, 264, 656, 2000.

11. Community Pharmacy Wales. *Letter to pharmacy contractors.* 2006. [accessed online at: www.psnc.org.uk/uploaded_txt/Joint%20Letter%20PHJ%20LJ%20re%20NES%20Indic%20rates%20Nov%2006(final).pdf – 20/12/2006]

12. Darke, S. and Zador, D. *Fatal Heroin 'Overdose': A Review.* Addiction.; 91 1765-1772. 1996.

13. Department of Health. *Drug Misuse and Dependence - Guidelines on Clinical management.* London, The Stationery Office. 1999.

14. Department of Health. *Clinical Governence: Quality in the new NHS.* London, The Stationery Office. 1999.

15. Department of Health. *Community pharmacies in England and Wales: 31st March 2001.* London, HMSO. [accessed online at: www.dh.gov.uk/assetRoot/04/02/22/99/04022299.pdf - 19/9/2006]

16. Department of Health. *Clinical Goverence in Community Pharmacy - Guidelines on Good Practice for the NHS.* London, Department of Health. 2001.

17. Department of Health. *Confidentiality: NHS Code of Practice.* London, Department of Health. 2003.

18. Department of Health. *Models of Care for substance misuse treatment - promoting quality, efficiency and effectiveness in drug misuse treatment services.* London, Department of Health. 2002.

19. Department of Health. *Choosing health through pharmacy: A programme for pharmaceutical public health 2005–2015.* London: Department of Health. 2005

20. Diamond, G. *Violence* [Letter] Pharmaceutical Journal, 265, 129. 2000.

21. Dole, V. & Nyswander, M. *A Medical Tretment for Diacetylmorphine (Heroin) Addiction - A Clinical Trial with Methadone Hydrochloride.* Journal of the American Medical Association 193, 80-84. 1965.

22. Elliot, C. and Ellingworth, D. *Assessing the representativeness of the British Crime Survey: the Impact of sampling error and response biases.* Sociological Research Online, 2. 1997 [assessed online at: http://www.socresonline.org.uk/socresonline/2/4/3.html - 5/10/2006]

23. Farrell, M., Ward, J., Mattick, R., Hall, W., Stimson, G. V., des Jarlais, D., Gossop, M., & Strang, J. *Methadone maintenance treatment in opiate dependence: a review.* 997-1001. 1994.

24. Finberg, M. *Clarification Please.* [Letter] Pharmaceutical Journal, 264, 883, 2000.

25. Ford C, Barnard J, Bury J, Carnwath J, Gerada C, Joyce A et al. *Royal College of General Practitioners: Guidance on the use of methadone for the treatment of opioid dependence in primary care.* London: Royal College of General Practitioners; 2005

26. Glaser, B. and Strauss, A. *The discovery of grounded theory: Strategies for Qualitative research.* Chicago, Aldine. 1967.

27. Glanz, A., Byrne, C., & Jackson, P. *Role of community pharmacies in prevention of AIDS among injecting drug misusers: findings of a survey in England and Wales.* British Medical Journal 299, 1076-1079. 1989.

28. Gossop, M., Marsden, J., & Stewart, D. *NTORS at One Year: the National Treatment Outcome Research Study - Changes in Substance Use, Health and Criminal Behaviours One Year after Intake.* London, Department of Health. 1998.

29. Gossop, M., Marsden, J., Stewart, D., & Treacy, S. *Change and stability of change after treatment of drug misuse: 2 year outcomes from the National Treatment Outcome Research Study (UK).* Addictive Behaviours 27, 155-166. 2002.

30. Grimshaw, J. and Russell, I. *Effect of clinical guidelines on medical practice: a systematic review of rigorous evaluations.* Lancet 342, 1317-1322. 1993.

31. Harding, G., Smith, F. J., & Taylor, K. M. G. *Injecting drug misusers- pharmacists attitudes.* Journal of Social and Administrative Pharmacy 9, 35-41. 1992.

32. Health Protection Agency et al . Shooting Up: *Infections among injecting drug users in the United Kingdom 2003. An update October 2004.* London: Health Protection Agency, November 2004. [Accessed online: http://www.hpa.org.uk/infections/topics_az/injectingdrugusers/ShootingUp-2004.pdf - 20/12/2006]

33. Hepler, C. D. & Strand, L. M. *Opportunities and responsibilities in pharmaceutical care.* American Journal of Hospital Pharmacy, 47, 533-543. 1990.

34. Home Office. *Updated Drugs Strategy. London,* HMSO. 2002 [Accessed online at http://www.drugs.gov.uk/publication-search/drug-strategy/updated-drug-strategy-2002.pdf - 19/12/2006]

35. Home Office. *Trends in drug use and offending: Results of the NEW-ADAM programme 1999-2002.* London; HMSO. 2004. [accessed online at www.homeoffice.gov.uk/rds/pdfs04/r219.pdf - 19/9/2006]

36. Home Office. *Crime in England and Wales 2005-06.* London, HMSO. 2006. [Accessed online at www.homeoffice.gov.uk/rds/index.htm - 19/9/2006]

37. Hubbard, R., Craddock, S., Flynn, P., Anderson, J., & Etheridge, R. *Outcomes of one year follow up outcomes in the Drug Abuse Treatment Outcome Study (DATOS).* Psycology of Addictive Behaviours 11, 261-278. 1997.

38. Hughes, C. and McCann, S. *Perceived interprofessional barriers between community pharmacists and general practitioners: a qualitative assessment.* British Journal of General Practice 53, 600-606. 2003.

39. Hutchinson, S. J., Taylor, A., Gruer, L., Barr, C., Mills, C., Elliott, L., Goldberg, D. J., Scott, R., & Gilchrist, G. *One-year follow-up of opiate injectors treated with oral methadone in a GP-centred programme.* Addiction 95, 1055-1068. 2000.

40. Jackson, M. *Pharmacists are the experts!* [Letter] Pharmaceutical Journal, 268, 431. 2002.

41. Johnson, R., Chutuape, M., Strain, E., Walsh, S., Stitzer, M., & Bigelow, G. *A comparison of levomethadyl acetate, buprenorphine, and methadone for opioid dependence.* New England Journal of Medicine 343, 1290-1297. 2000.

42. Judd, A. et al *Incidence of hepatitis C virus and HIV among new injecting drug users in London: prospective cohort study.* British Medical Journal. 330: 24 - 25. 2005

43. Lewis, D. Bellis, M. *General practice or drug clinic for methadone maintenance? A controlled comparison of treatment outcomes.* International Journal of Drug Policy. Vol. 12(1)(pp 81-89), 2001.

44. Luger, L., Bathia, N., Alcorn, R., & Power, R. *Involvement of community pharmacists in the care of drug misusers: pharmacy-based supervision of methadone consumption.* International Journal of Drug Policy, 11, 227-234. 2000.

45. Luty J. *Prescribing injectable heroin to addicts: Unproven, unpopular, unbelievable.* Journal of Substance Use. 8, 5-6, 2003.

46. McCormick,R., Bryant, L., Sheridan, J. and Gonzalez, J. *New-Zealand community pharmacy attitudes toward opioid-dependent clients.* Drugs-Education, Prevention and Policy. 13, 563-575. 2006.

47. Marsch, L. *The efficacy of methadone maintenance interventions in reducing illicit opiate use, HIV risk behaviour and criminality: a meta analysis.* Addiction 93, 515-532. 1998.

48. Matheson, C. *Illicit drug users' views of a 'good' and 'bad' pharmacy service.* Journal of Social & Administrative Pharmacy. 15, 104-112, 1998.

49. Matheson, C., Bond, C. M., & Mollison, J. *Attitudinal factors associated with community pharmacists' involvement in services for drug misusers.* Addiction 94, 1349-1359. 1999.

50. Matheson, C. & Bond, C. M. *Motivations for and barriers to community pharmacy services for drug misusers.* International Journal of Pharmacy Practice 7, 256-263. 1999.

51. Matheson, C., Bond, C. M., & Pitcairn, J. *Community pharmacy services for drug misusers in Scotland: what difference does 5 years make?* Addiction 97, 1405-1411. 2002.

52. Matheson, C., Bond, C., & Tinelli, M. *Community pharmacists and drug misusers: national trends in attitudes and current practice (1995-2000-2006)* International Journal of Pharmacy Practice, supplement 2. 2006.

53. McBride, A., Meredith-Smith, P., & Davies, M. *Helping injecting drug users: a role for community pharmacists.* Pharmaceutical Journal 250, 708-709. 1993.

54. McBride, A., Pates, R., Arnold K., Ball, N. *Needle Fixation, the Drug Users' Perspective: A qualitative study.* Addiction 96, 1049-1058, 2001.

55. McBride, A., Pates, R., Li, S., & Ramadan, R. *Service provision for drug users: a survey of community pharmacies in a South Wales health authority.* Pharmaceutical Journal 267, 820-823. 2001.

56. Miles, A. and Huberman, M.*Qualitative Data Analysis.* Sage; California. 1994.

57. Misuse of Drugs Act. London; HMSO. 1971.

58. Moser, C. and Kalton, G. *Survey Methods in social investigation.* Aldershot: Hants, Gower. 1986

59. Nakajima, H. & Steinbach, D. *The role of the pharmacist in the fight against the HIV-AIDS pandemic: a joint declaration between the World Health Organisation and the International Pharmaceutical Federation.* 7-9-2004.

60. National Drug Treatment Monitoring System. *Numbers in Treatment April 2005-March 2006.* [accessed online at www.ndtms.net/NatEnglandPerformanceReport.aspx?AllAgesOrYP=AllAges&Archive=05And06 – 19/9/2006]

61. National Treatment Agency. *Numbers of individuals in contact with structured drug treatment services in 2004-05.* [accessed online at www.nta.nhs.uk/programme/national/perf_info_oct05/Nos_in_treatment_200405.pdf - 19/9/2006]

62. National Treatment Agency. *Average waiting time for drug treatment in weeks.* [accessed online at

www.nta.nhs.uk/programme/national/perf_info_sep05/waitingtimeSep05publish.pdf - 19/9/06]

63. National Treatment Agency. *Findings of a survey of needle exchanges in England.* National Treatment Agency, London. 2006.

64. Neale, J. *Drug users views of substitute prescibing conditions.* International Journal of Drug Policy 10, 247-258. 1999.

65. Neale, J. *Methadone, methadone treatment and non-fatal overdose.* Drug and Alcohol Dependence 58, 117-124. 2000.
66. Neale, J. *Drug users' views of drug service providers.* Health & Social Care in the Community, 6, 308-317. 1998.

67. Neale, J. *Drug users' views of prescribed methadone.* Drugs-Education Prevention and Policy, 5, 33-45. 1998.

68. Newman, R. *The promises and pitfalls of methadone treatment.* International Journal of Drug Policy. 66-67. 1996.

69. Oppenheim, A. *Questionnaire design, interviewing and attitude measurement.* Pinter, London. 1992.

70. Pallant, J. *SPSS Survival Manual,* Open University Press, Buckingham, Philadelphia. 2001.

71. Parsons, J., Hickman, M., Turnbull, P. J., McSweeney, T., Stimson, G. V., Judd, A., & Roberts, K. *Over a decade of syringe exchange: Results from 1997 UK survey.* Addiction, 97, 845-850. 2002.

72. Perneger, T. V., Mino, A., Giner, F., & Broers, B. *Patterns of opiate use in a heroin maintenance programme.* Psychopharmacologia. 152, 7-13. 2000.

73. Perneger, T. V., Giner, F., del Rio, M., & Mino, A. *Randomised trial of heroin maintenance programme for addicts who fail in conventional drug treatments.* British Medical Journal, 317, 13-18. 1998.

74. Peterson, G. *Drug misuse and harm reduction: pharmacy's magnificent contribution, but at what cost?* Journal of Clinical Pharmacy and Therapeutics. 24, 165-169.

75. Pharmaceutical Services Negotiating Committee. *NHS Community Pharmacy Contractual Framework – Essential Services.* 2004. [accessed online at: www.psnc.org.uk/uploaded_txt/Service%20Spec%20ES1%20-%20Dispensing%20_v1%2010%20Oct%2004_.pdf – 20/12/2006]

76. Polkinghorne J., *The task force to review services for drug misusers.* London: Department of Health; 1996

77. Ponton R. and Scott J. *Injection preparation processes used by heroin and crack cocaine injectors.* Journal of Substance Use. 9, 7-19, 2004.

78. Roberts, K. *Supervised consumption of methadone in a community pharmacy.* In: Methadone Matters: evolving community methadone treatment of opiate addiction. Edited by Strang, J and Tober, G. Martin Dunitz, London. 2003.

79. Roberts, K. & Hunter, C. *A comprehensive system of pharmaceutical care for drug misusers.* Harm Reduction Journal, 1, 1-6. 2004.

80. Royal Pharmaceutical Society of Great Britain. *Code of Ethics and Standards.* London: RPSGB; 2006 [accessed online at: http://www.rpsgb.org.uk/pdfs/coe060524.pdf - 20/12/2006]

81. Sheridan, J. & Barber, N. *Drug misusers' experiences and opinions of community pharmacists and community pharmacy services.* Pharmaceutical Journal 257, 325-327. 1996.

82. Sheridan, J., Strang, J., Taylor, C., & Barber, N. *HIV prevention and drug treatment services for drug misusers: a national study of community pharmacists' attitudes and their involvement in service specific training.* Addiction 92, 1737-1748. 1997.

83. Sheridan, J. & Strang, J. *Late responders and non-responders to a postal survey questionnaire: analysis of potential further response and non-response bias.* International Journal of Pharmacy Practice 6, 170-175. 1998.

84. Sheridan, J., Lovell, S., Turnbull, P., Parsons, J., Stimson, G., & Strang, J. *Pharmacy-based needle exchange (PBNX) schemes in South-East England: a survey of service providers.* Addiction 95, 1551-1560. 2000.

85. Sheridan, J., Strang, J., Barber, N., & Glanz, A. *Role of community pharmacies in relation to HIV prevention and drug misuse: findings from the 1995 national survey in England and Wales.* British Medical Journal, 313, 272-274. 1996.

86. Silverman, D. *Doing Qualitative Research: A Practical Handbook.* London, Sage. 2000.

87. Simpson, D. & Sells, S. *Effectiveness of treatment for drug abuse: an overview of the DARP research program.* Advances in Alcohol and Substance Abuse 2, 7-29. 1983.

88. Smith, F. J. *Research Methods in Pharmacy Practice.* London, Pharmaceutical Press. 2002.

89. Smith, J.A. *Semi structured interviewing & qualitative analysis.* In: Smith, J.A., Harre, R. & Van Langenhove, L. (eds) Rethinking Methods in Psychology. London: Sage. 1995.

90. Streiner, D. and Norman, G. *Health measurement scales: a practical guide to their development and use.* Oxford University Press, Oxford. 1995.

91. Strike, C.J., *el al. Policy changes and the methadone maintenance treatment system for opioid dependence in Ontario, 1996 to 2001.* Journal of Addictive Diseases, 24, 39-51. 2005.

92. Walker, M. *Shared Care for Opiate Substance Misusers in Berkshire.* Pharmaceutical Journal, 266, 547-552. 2001.

93. Ward, J., Hall, W., & Mattick, R. *Role of maintenance treatment in opioid dependence.* The Lancet, 353, 221-226. 1999.

94. Willig, C. *Interpretive phenomenology* in Willig C. Qualitative Research in Psychology. Buckingham: Open University. 2001.

95. Working Party on Pharmaceutical Services for Drug Misusers. *A report presented to the Council of the Royal Pharmaceutical Society of Great Britain.* London, RPSGB. 1998.

96. Wright, J. D. & Pearl, L. *Experience and knowledge of young people regarding illicit drug use, 1969-99.* Addiction 95, 1225-1235. 2000.

PUBLICATION AND DISSEMINATION OF RESULTS

PUBLICATIONS

1. Britton, R. and Scott, J. An audit of the provision of supervised methadone consumption services by community pharmacists in South West England in 2003-2004. *International Journal of Pharmacy Practice. BPC Practice Abstracts, Supplement 2, 21-28(8). 2006.*

2. Britton, R. and Scott, J. Community pharmacy services to drug misusers in the South West of England: Results of the 2003-2004 postal survey. *International Journal of Pharmacy Practice, 14 (4), 235-24.. 2006.*

PAPERS SUBMITTED FOR PUBLICATION

Britton, R. and Scott, J. Availability of needles and syringes to injecting drug users from pharmacies in South West England (submitted to the International Journal of Drug Policy)

POSTER PRESENTATIONS

1. Britton, R. and Scott, J. Levels of Pharmacy Based Needle Exchange (PBNX) in South West England – cause for concern? [Poster presentation – International Conference on the Reduction of Drug Related Harm, Belfast, 2005]

2. Britton, R. and Scott, J. Facilitators and Barriers to a Community Pharmacy Model of Care for the provision of services to drug misusers – a qualitative study. [Poster presentation – Health Services Research and Pharmacy Practice Conference, Bath, 2006]

Abstracts for the above presentations may be found in Appendix Nine.

CONFERENCE PRESENTATIONS

1. Supervised consumption with dignity – an impossibility? and Working with Drug Users, Dangers, Myths and Reality. [Presentation given at the National Drug Treatment Conference, London, 2005.]

2. Drug Treatment and the Role of the Pharmacist. [Presentation given at the National Drug Treatment Conference, Glasgow, 2006]

Abstracts for the above presentations may be found in Appendix Ten.

APPENDICES

APPENDIX ONE

COMMUNITY PHARMACY SERVICES TO DRUG MISUSERS: A POSTAL QUESTIONNAIRE FOR COMMUNITY PHARMACISTS

Study Number:.....

Community Pharmacy Services to Drug Misusers

A Postal Questionnaire for Community Pharmacists

Instructions for Completion

This questionnaire should take between 15 and 20 minutes to complete

- Please answer all sections. However, if you do not **currently** dispense methadone to drug misusers, you do not need to answer Part TWO.
- Please tick one box for each question unless otherwise specified.
- If there is insufficient space provided for you to answer some of the questions, or you wish to expand an answer more fully, then please continue on a separate piece of paper, indicating the question number clearly.
- **All answers will be treated with the strictest of confidence.** When the questionnaire is completed, please return it in the enclosed pre-pay envelope.

The next planned stage of the research is to conduct one-to-one interviews, local focus groups (group discussions around topics from the questionnaire) and observational work with willing pharmacists. If you would like to participate further, please indicate which studies you would like to participate in on the form at the end of the questionnaire.

THANK YOU FOR TAKING PART IN THIS QUESTIONNAIRE. YOUR TIME IS MUCH APPRECIATED.

Community Pharmacists and the treatment of Drug Misuse

FIRSTLY, please provide some brief details about YOU and the PHARMACY in which you work.

1 *Age in years:* _____ **2** *Gender:* MALE ☐ FEMALE ☐

3 *Number of years registered:* _____

4 *Number of years at present pharmacy:* _____

5 *Location of Community Pharmacy:*

Rural	☐	Urban	☐
Village	☐	City Centre	☐
Small Town	☐		

6 *Type of business:*

Single outlet	☐	Large Multiple (>9 branches)	☐
Small Multiple (2-9 branches)	☐	Health Centre	☐

7 *Do you have responsibility for making decisions about services for drug misusers?*

YES – sole responsibility	☐
YES – with someone else	☐
NO	☐

8 *Are you:*

Owner	☐	Employee	☐
Locum	☐	Superintendent	☐

Part ONE: This section aims to gather information on your level of involvement with drug misusers. Please complete this section <u>even if you have never had any involvement</u> with drug misusers.

9 *Are there any OTC products that you believe are being misused in your local area?* YES ☐ NO (go to 11) ☐ DON'T KNOW (go to 11) ☐

If YES, which products do you believe are being misused? _____

---

10 *If you answered YES to question 9, does this affect your sales policy for these products?* YES ☐ NO ☐

Rachel Britton, Department of Pharmacy and Pharmacology, University of Bath

If YES please explain in what way: _____

_____

If NO please explain why not: _____

_____

11 *Approximately how many individuals (excluding diabetics) have asked to purchase needles or syringes in the past week?*

Nil ☐
0-5 ☐
6-10 ☐
11-20 ☐
> 21 ☐

12 *Are you prepared to sell needles or syringes to known or suspected drug addicts/misusers?*

YES, currently do ☐
YES, but no demand ☐
NO ☐

Please give reasons(s): _____

_____

13 *Do you provide a syringe/needle exchange scheme at present?*

YES (go to 13a,b,c,d&e) ☐
NO (go to 13f&g) ☐

a) If YES, please estimate the number of people who use the service (per week): _____

b) If YES, what was your motivation for providing such a scheme_____

_____

c) If YES, please list the types of drugs you suspect are being injected by the people using the syringe/needle exchange scheme _____

_____

d) If YES, are you and your staff vaccinated against Hepatitis B?

YES ☐
NO ☐

e) If YES, have you and your staff had any formal training on the management of the syringe/needle exchange scheme?

YES ☐
NO ☐
(Please go to Q. 14)

f) If NO please give reason(s) for not providing a syringe/needle exchange_____

_____

g) If NO, what (if anything) would encourage you to provide a needle/ syringe exchange scheme?

_____

_____

14 *Are you currently dispensing any drugs to any person who is being prescribed these drugs for dependence?*

YES ☐
NO ☐

If YES, which drugs do you dispense at present? _____

_____

15 *Do you dispense methadone to any person being prescribed it for drug dependence?*

YES ☐
NO (no demand) ☐
NO (not willing to) ☐

If you have ticked NO (not willing to) please state reason(s):_____

_____

If you answered YES to question 15 please continue with part TWO.
If you answered NO, please go to part THREE and then part FOUR.

Part TWO: Methadone Dispensing *(Please look at this week's prescriptions for methadone while completing this section)*

16 *Is your pharmacy part of a formal 'shared care scheme' for the treatment of people dependent on drugs such as heroin?*

YES ☐
NO ☐
DON'T KNOW ☐

If YES, which organisation organises the shared care scheme? _____

_____

If YES, what support do you (as a Pharmacist) get from the organisers of the shared care scheme?

_____

_____

17 *How many drug misusers do you <u>currently</u> dispense methadone for in total?* (Where currently is defined as the number of different people for whom you have dispensed methadone in the past week.) _____

18 *For this total number of people, please indicate the dispensing interval and source of prescription in the following table. If there is none in any category, please put nil:*

Dispensing Interval	**Number of FP10 (ad) forms (blue)**	**Number of Hospital/ Clinic forms (pink or orange)**
Daily		
Three times weekly		
Twice weekly		
Weekly		
Fortnightly		
Weekend only		
Other (please specify)		

19 *How many of those clients mentioned in question 17 would you describe as regular clients?* (where regular is defined as clients receiving their prescription consistently from your pharmacy for one month or longer) _____

20 *For any of those that receive a dose daily, do you supervise the consumption of methadone on your pharmacy premises?*

YES (go to 20a and b)☐
NO (go to 20c and d) ☐

a) *If YES for how many do you supervise the consumption of methadone on the premise at present?* _____

b) *Do you check they have swallowed the dose?*

YES ☐
NO (go to 21) ☐

If YES, how do you check that the dose has been swallowed?_____

_____(go to 21)

c) *If* NO, *would you be prepared to supervise the consumption of controlled drugs (CDs) for the treatment of drug dependence?* YES ☐ NO ☐ UNSURE ☐

If you answered NO or UNSURE above, please give reason(s): _____

_____

d) *What, if anything, would encourage you to supervise the consumption of methadone?* _____

_____

21 *Have you ever had to stop dispensing methadone to a particular drug misuser for any reason?* YES ☐ NO ☐

If YES, please give details: _____

_____

22 *Have you ever withheld a dose of methadone from a client?* YES ☐ NO ☐

If YES, please give details: _____

_____

23 *Do you supervise the consumption of any other drugs used to treat dependence?* YES ☐ NO ☐

If YES, please list which drug(s): _____

_____

24 *Do you have a private area in which to supervise consumption of drugs used to treat dependence?* YES ☐ NO ☐

If YES, do you always offer this to the drug users? YES ☐ NO ☐

If NO, has any drug misuser ever commented that they would like to be supervised in a private area? YES ☐ NO ☐

25 *Have you ever contacted the prescriber about concerns over a particular drug user or their treatment?* YES ☐ NO ☐

If YES, what type of concerns have you raised with the prescriber. Please describe.

_____

_____

26 *Does your pharmacy have a written Standard Operating Procedure (SOP)*

a) ....for the dispensing of CDs for the treatment of dependence? YES ☐ NO ☐

b) ....for the supervision of consumption of CDs for the treatment of dependence? YES ☐ NO ☐

27 *In general do you:* *(Please tick the appropriate box)*

	always	**sometimes**	**never**
a) lay down ground rules for a new person with a prescription for methadone?	☐	☐	☐
b) have a written contract with drug misusers?	☐	☐	☐
c) ask drug misusers for identification on their first visit?	☐	☐	☐
d) ask for identification each time they collect a supply?	☐	☐	☐
e) make up prescriptions in advance?	☐	☐	☐
f) provide plastic measures with prescriptions which are taken away?	☐	☐	☐
g) supply information leaflets concerning drug misuse to new drug misusing clients?	☐	☐	☐
h) supply information leaflets concerning methadone to new clients who present a prescription for methadone?	☐	☐	☐
i) supply information leaflets concerning HIV prevention to new drug misusing clients?	☐	☐	☐
j) offer face to face advice on the management of drug misuse?	☐	☐	☐
k) offer face to face advice concerning methadone?	☐	☐	☐
l) offer face to face advice on HIV prevention?	☐	☐	☐
m) treat drug misusers the same as other customers?	☐	☐	☐
If you supervise consumption of CDs do you:			
n) provide water after the dose is swallowed?	☐	☐	☐
o) .... in a disposable cup?	☐	☐	☐

Please go to Part THREE

Part THREE: Knowledge and Training

The aim of this section is to understand the level of knowledge and training that Community Pharmacists' possess with regard to drug misuse and treatment. Please answer the questions without reference to texts. If you do not know the answers, please tick 'Unsure'.

28 *Please tick true or false to the following statements:*

a) 5mg of methadone could be fatal to an opioid naïve adult.	T ☐	F ☐
b) Taking benzodiazepines with methadone will help with withdrawal.	T ☐	F ☐
c) 10mg of methadone could kill a child.	T ☐	F ☐
d) Opiate overdose may cause respiratory depression, coma and death.	T ☐	F ☐

29 *How long (days) on average does a person's tolerance methadone decrease to a point where the original dose may cause toxicity?*

1 day ☐
2 days ☐
3 days ☐
4 days ☐
5 days ☐
Unsure ☐

30 *When supervising consumption of Subutex (buprenorphine) how long does it take for the full dose to be absorbed from the mouth?*

> 30 seconds ☐
30 secs-1min ☐
1 –2 mins ☐
Until tablet has dissolved ☐
Unsure ☐

31 *A drug user arrives at your pharmacy for his daily dose of methadone showing obvious signs of alcohol intoxication. What do you do?*

Give out his methadone as usual ☐
Refuse to dispense his methadone ☐
Tell him to come back when sober ☐
Send him back to his prescriber ☐
Unsure ☐

32 *People who misuse heroin may ask to buy citric acid. Why is this?* _____

_____

33 *Please list three signs of opiate intoxication:* _____

_____

34 *Please list three symptoms of opiate withdrawal:* _____

_____

Rachel Britton, Department of Pharmacy and Pharmacology, University of Bath

35 *Have you ever had any professional training on drug misuse?*

YES ☐
NO ☐

If YES please indicate type of training:
(Please tick all that apply)

undergraduate course ☐
Postgraduate training ☐
CPPE distance learning ☐
local branch meeting ☐
other_____

36 *Would you like further professional training on drug misuse?*

YES ☐
NO ☐

If YES please indicate the format of the training you think would be useful:
(Please tick all that apply)

distance learning ☐
local workshops ☐
discussion groups ☐
lectures/seminars ☐
journal articles ☐
other_____

Please give details of the topics you think would be useful: _____

---

37 *Have you ever had any professional training on the prevention of blood borne diseases (e.g. HIV/ hepatitis)?*

YES ☐
NO ☐

If YES please indicate type of training:
(Please tick all that apply)

undergraduate course ☐
Postgraduate training ☐
CPPE distance learning ☐
local branch meeting ☐
other_____

38 *Would you like training on prevention of blood borne diseases?*

YES ☐
NO ☐

If YES please indicate the format of the training you think would be useful:
(Please tick all that apply)

distance learning ☐
local workshops ☐
discussion groups ☐
lectures/seminars ☐
journal articles ☐
other_____

Please go to Part FOUR

Rachel Britton, Department of Pharmacy and Pharmacology, University of Bath

Part FOUR: Please indicate your opinions on the following issues concerning drug misusers and the role of the community pharmacist in managing drug misuse. Please answer even if you do not currently have any drug misusers visiting your pharmacy. *(Note by 'drug misuser' we mean people who participate in drug misuse and who, in the pharmacy setting, are often referred to as 'drug addicts').*

		(Please tick the appropriate box)				
		strongly agree	**agree**	**uncertain**	**disagree**	**strongly disagree**
39	I believe that prescribing maintenence[1] doses of a CD[2] to a drug misuser will improve their quality of life.	☐	☐	☐	☐	☐
40	I believe that providing drug misusers maintenance doses of CDs will stop them using street drugs	☐	☐	☐	☐	☐
41	I believe drug misusers should only be prescribed CDs if it is in reducing doses to help them 'come off' drugs	☐	☐	☐	☐	☐
42	I believe providing maintenance doses of CDs to drug misusers is a waste of NHS resources.	☐	☐	☐	☐	☐
43	I believe that CDs should be dispensed to drug misusers through a central clinic rather than community pharmacies.	☐	☐	☐	☐	☐
44	I believe that community pharmacists have a duty provide services to drug misusers in order to protect the wider community from the consequences of drug misuse.	☐	☐	☐	☐	☐
45	I believe that dispensing maintenance doses CDs to drug misusers is part of a pharmacist's professional duty.	☐	☐	☐	☐	☐
46	I believe that my staff would rather not have to deal with drug misusers.	☐	☐	☐	☐	☐
47	I believe that drug misusers visiting my pharmacy endanger the safety of my staff.	☐	☐	☐	☐	☐
48	I believe that drug misusers visiting my premises have a damaging effect on business.	☐	☐	☐	☐	☐

[1]Maintenence refers to the deliberate prescribing of products such as methadone in regular doses. The aim of this approach in the management of drug misuse is to reduce the associated risks.
[2]Controlled Drug (Schedule 2 or 3, Misuse of Drugs Act, 1971)

Rachel Britton, Department of Pharmacy and Pharmacology, University of Bath

		strongly agree	agree	uncertain	disagree	strongly disagree
49	I believe that drug misusers who visit my pharmacy are treated by us as 'normal' members of the public.	☐	☐	☐	☐	☐
50	I believe it is a persons' own fault if they become addicted to drugs.	☐	☐	☐	☐	☐
51	I believe that syringes/ needles should only be supplied as part of a needle exchange scheme.	☐	☐	☐	☐	☐
52	I believe that drug addiction is an illness not a vice.	☐	☐	☐	☐	☐
53	I believe that all drug misusers should be encouraged to 'come off' drugs altogether.	☐	☐	☐	☐	☐
54	I believe that selling syringe/ needles encourages illicit drug misuse.	☐	☐	☐	☐	☐
55	I believe that drug misusers are taking some responsibility for their health if they ask to buy syringes/needles.	☐	☐	☐	☐	☐
56	I believe it is unethical to sell drug misusers' needles or syringes without having a means of disposing of them.	☐	☐	☐	☐	☐
57	I believe the community pharmacy is an appropriate place for a syringe/needle exchange scheme.	☐	☐	☐	☐	☐
58	I believe that I would never supervise the consumption of doses of CDs by drug misusers on my pharmacy premises.	☐	☐	☐	☐	☐
59	I believe supervising consumption of CDs by drug misusers on the pharmacy premises. is an inappropriate role for the community pharmacist.	☐	☐	☐	☐	☐
60	I believe supervising the consumption of CDs by drug misusers prevents the illicit selling of these CDs on the street.	☐	☐	☐	☐	☐

		strongly agree	agree	uncertain	disagree	strongly disagree
61	I believe that a drug misuser should have a private area in the pharmacy when (s)he is being supervised consuming a dose of a CD.	☐	☐	☐	☐	☐
62	I believe that a drug misuser is embarrassed when they have to consume their dose of a CD in front of a member of staff, or whilst other customers are looking on.	☐	☐	☐	☐	☐
63	I believe that a written contract between the pharmacist and drug misuser would help develop trust between the two individuals.	☐	☐	☐	☐	☐
64	I believe it is appropriate for pharmacists to provide advice (verbal or written) to drug misusers on the management of drug misuse.	☐	☐	☐	☐	☐
65	I believe that I have sufficient knowledge about drug misuse to be able to provide advice to drug misusers on the management of their drug use.	☐	☐	☐	☐	☐
66	I believe that I would never provide advice (written or verbal) on safer injecting to intravenous drug misusers.	☐	☐	☐	☐	☐
67	I believe that it is the responsibility of the pharmacist to provide information on CD's used in the treatment of drug misuse to a drug misuser.	☐	☐	☐	☐	☐
68	I believe it is ethical to sell drug misusers' needles or syringes.	☐	☐	☐	☐	☐
69	I believe that I am adequately supported by the local Primary Care Trust in providing services to drug misusers.	☐	☐	☐	☐	☐
70	I believe that the reason services are provided for drug users is to improve the quality of life of that individual, rather than the community as a whole	☐	☐	☐	☐	☐

Please check you have completed every question, and see over the page!

WOULD YOU LIKE TO PARTICIPATE FURTHER?

The aim of this study is to produce a model of community pharmaceutical care for drug misusers. In order to achieve this, I need to understand more about why pharmacists do, or do not provide services to drug misusers, and watch pharmacists and dispensary staff in action so that I can understand a model of care might look like.

I am also planning to interview drug misusers who use community pharmacies, so that I can understand what is important to them about the service that they receive from pharmacies.

The next planned stage of the research is to conduct one-to-one interviews, local focus groups (group discussions around topics from the questionnaire) and observational work with willing pharmacists.

The one-to-one interviews and observational work will be carried out within the pharmacy in which you work, at a time and date to suit you.
The focus groups will be carried out during the evening at a local venue, and should last around one and a half hours. Refreshments will be available on the night, and travel expenses will be paid.

All the data gathered from these studies will remain confidential.

Please indicate which study you would like to participate in...

1. One to One interview ☐
2. Focus Group ☐
3. Observational Study ☐
4. All the above ☐

Please provide your name and contact details. These will be detached and stored separately from your questionnaire response.

Name: _____

Daytime Telephone: _____

Evening Telephone: _____

Rachel Britton, Department of Pharmacy and Pharmacology, University of Bath

APPENDIX TWO

COMMUNITY PHARMACY SERVICES TO DRUG MISUSERS: A POSTAL QUESTIONNAIRE FOR COMMUNITY PHARMACISTS (Shortened Version)

Community Pharmacy Services to Drug Misusers

A Postal Questionnaire for Community Pharmacists

Instructions for Completion

- Please tick one box for each question unless otherwise specified.
- **All answers will be treated with the strictest of confidence.** When the questionnaire is completed, please return it in the enclosed pre-pay envelope.

---

1 *Approximately how many individuals (excluding diabetics) have asked to purchase needles or syringes in the past week?*

Nil ☐
0-5 ☐
6-10 ☐
11-20 ☐
> 21 ☐

2 *Are you prepared to sell needles or syringes to known or suspected drug addicts/misusers?*

YES,currently do ☐
YES, but no demand ☐
NO ☐

3 *Do you provide a syringe/needle exchange scheme at present?*

YES (go to 3a,b&c) ☐
NO (go to 4) ☐

a) If YES, please estimate the number of people who use the service (per week): _____

b) If YES, are you and your staff vaccinated against Hepatitis B?

YES ☐
NO ☐

c) If YES, have you and your staff had any formal training on the management of the syringe/needle exchange scheme?

YES ☐
NO ☐

4 *Are you currently dispensing any drugs to any person who is being prescribed these drugs for dependence?*

YES ☐
NO ☐

5 *How many drug misusers do you currently dispense methadone for in total?* (Where currently is defined as the number of different people for whom you have dispensed methadone in the past week.) _____

6 *For this total number of people, please indicate the dispensing interval and source of prescription in the following table. If there is none in any category, please put nil:*

Dispensing Interval	Number of FP10 (ad) forms (blue)	Number of Hospital/ Clinic forms (pink or orange)
Daily		
Three times weekly		
Twice weekly		
Weekly		
Fortnightly		
Weekend only		
Other (please specify)		

7 *How many of those clients mentioned in question 5 would you describe as regular clients?* (where regular is defined as clients receiving their prescription consistently from your pharmacy for one month or longer) _____

8 *For any of those that receive a dose daily, do you supervise the consumption of methadone on your pharmacy premises?* YES ☐ NO ☐

a) *If YES for how many do you supervise the consumption of methadone on the premise at present?* _____

9 *Does your pharmacy have a written Standard Operating Procedure (SOP)*
a) ....for the dispensing of CDs for the treatment of dependence? YES ☐ NO ☐

b) ....for the supervision of consumption of CDs for the treatment of dependence? YES ☐ NO ☐

10 *Have you ever had any professional training on drug misuse?* YES ☐ NO ☐

THANK YOU FOR COMPLETING MY QUESTIONNAIRE. PLEASE RETURN IT IN THE FREEPOST ENVELOPE.

Study Number:_____

APPENDIX THREE

LETTER OF ETHICAL APPROVAL FOR PHARMACIST INTERVIEWS

APPENDIX FOUR

SEMI-STRUCTURED INTERVIEW SCHEDULE (PHARMACISTS)

One to One Interview Schedule (Pharmacists)

- *Thank you for agreeing to take part in this interview. In a moment I will start the tape. If at anytime you wish me to stop, just let me know. I'm going to start the tape now, OK?*

START TAPE

Role of the Pharmacist

- *Firstly, I am going to ask you some questions about the role of community pharmacy in the treatment of drug misuse*

1. What role do you think the pharmacist plays in the treatment of drug misuse?
2. How do your staff feel about providing services to drug misusers?

Service Provision

- *OK, now for some questions on the way that you provide services to drug misusers. Firstly, do you provide a supervised methadone service?* (If YES, go to Q3, If NO, go to Q5)

3. Do you use contracts for supervised methadone? (If YES – where did you get your contact from?)
4. Do you find them useful?
   PROMPT – in what way?
   Why not?
5. Do you think the community pharmacy is an appropriate place for needle exchange?
   PROMPT - Why?
   Why not?
6. What would encourage you to provide needle exchange?
7. What do you see as the potential risks in running needle exchange?
8. How could these risks be minimised?
9. What are you views on selling syringes to drug users?

Knowledge

- *I would like to ask you some general questions about drug misuse services in England.... OK?*

10. Do you think all addicts should attend 'specialist centres' for treatment?
    PROMPT - Why?
    Why not?
11. What are the key benefits from you providing services to drug misusers?
12. Do you think that prescribing opiate substitutes to addicts is an appropriate way to treat opiate addiction?
    PROMPT - Why?
    Why not?
    What do you think the answer is?

Problems and Positives

- *My initial survey indicated that pharmacists and their staff sometimes come up against problems when providing drug misuse services. I'd like to ask you about this....*

13. What difficulties do you face in your day to day practice with regard to drug misusers?
    PROMPT – making up Rx's in advance
    Inappropriate behaviour
14. How could you overcome these difficulties?
15. If these difficulties could be over come – would you get more involved than you currently are?
16. Have you had any experiences which have put you off providing services to drug misusers?
17. Would you be willing to share these?
18. Reflecting on these experiences – could anything be implemented or done differently to avoid this happening again?
19. What positive experiences have you had in your professional interaction with drug misusers?
20. Have these encouraged you?

Support

- *Pharmacists who replied to my services had mixed views about the support that they received to provide drug misuse services. I'd like to ask you about this....*

21. What support do you receive (to provide services to drug misusers)?
    PROMPT - training?
    Financial
22. Is this support helpful in your day to day practice?
    PROMPT - If yes, how?
    If not, why not?
23. What support would you find helpful?

Recognition

24. Do you think that pharmacists are valued for the role that they play in the treatment of addiction?
    PROMPT - Why?
    Why not?
    How can this be changed?
25. At present there is no specific 'Model of Care' for pharmacy services to drug misusers – what do you think such a model should contain?

Thank you very much, that is the end of the interview, is there anything else that you would like to add?

STOP TAPE

APPENDIX FIVE

LETTER OF ETHICAL APPROVAL FOR SERVICE USER INTERVIEWS

APPENDIX SIX

SEMI-STRUCTURED INTERVIEW SCHEDULE (SERVICE USERS)

One to One Interview Topic Guide

- *Thank you for agreeing to take part in this interview. In a moment I will start the tape. If at anytime you wish me to stop, just let me know. I'm going to start the tape now, OK?*

START TAPE

Experience of Pharmacy Services

- *Firstly, I am going to ask you some questions about your experiences of using a pharmacy.*

1. What do you think about the services you get from the pharmacy?
   PROMPT – supervised methadone, needle exchange, advice from pharmacist

2. Would you like to see anything done differently? Why?

3. What do you think about drinking your methadone on the premises?

4. In general, what do you think about the way the pharmacy staff are with you?

5. Is there any other service that you would like from your pharmacy that you do not get now?
   PROMPT – minor illness advice, safer injecting

6. Have you had any past experiences of different pharmacies?
   - have you noticed any changes over the time you have been in treatment?
   - have you noticed differences in the pharmacists? In what way?

7. Why might someone miss a dose of methadone?

8. Why do you think a pharmacist might have to withhold a dose of methadone? (use vignette)

Model of Care

- *I have interviewed a number of pharmacists about how they provide services like supervised methadone and needle exchange. I would like to know what you think about some of the suggestions they made.*

1. Some pharmacists told me that they would like more information about clients and their treatment so that they can give more support
   - what information do you think a pharmacist should have?
   - do you think pharmacists should tell the doctor if someone misses a dose?

2. Pharmacists have told me that prescriptions can be a headache for them – what do you know about the law around prescriptions and do you think anything could be changed?

3. Some clients are asked to sign contracts when they start on supervised consumption. What do you think about contracts? What should they contain?

4. Some pharmacists told me that they felt embarrassed for their clients when they are made to drink methadone on the premises.
   - What do you think about this?
   - Can it be made better?
   PROMPT – use of private areas, wait until shop is empty

5. Some pharmacists told me that they wanted more training around drugs and drug misuse – what training do you think they need?

6. How do you rate the pharmacist in relation to other healthcare professionals (doctors, nurses, drugs worker)
7. In the future, some pharmacists will be able to prescribe drugs like methadone and Subutex. What do you think about this?

APPENDIX SEVEN

EN1: ENHANCED SERVICE SPECIFICATION - SUPERVISED ADMINISTRATION (CONSUMPTION OF MEDICATION)

NHS Community Pharmacy Contractual Framework

Enhanced Service – Supervised Administration (Consumption of Prescribed Medicines)

1. Service description

1.1 This service will require the pharmacist to supervise the consumption of prescribed medicines at the point of dispensing in the pharmacy, ensuring that the dose has been administered to the patient.

1.2 Pharmacies will offer a user-friendly, non-judgmental, client-centred and confidential service.

1.3 The pharmacy will provide support and advice to the patient, including referral to primary care or specialist centres where appropriate.

1.4 Examples of medicines which may have consumption supervised include methadone and other medicines used for the management of opiate dependence, and medicines used for the management of mental health conditions or tuberculosis.

2. Aims and intended service outcomes

2.1 To ensure compliance with the agreed treatment plan by:

- dispensing in specified instalments[1] (doses may be dispensed for the patient to take away to cover days when the pharmacy is closed),
- ensuring each supervised dose is correctly consumed by the patient for whom it was intended.

2.2 To reduce the risk to local communities of:

- over usage or under usage of medicines;
- diversion of prescribed medicines onto the illicit drugs market; and
- accidental exposure to the supervised medicines.

2.3 To provide service users with regular contact with health care professionals and to help them access further advice or assistance. The service user will be referred to specialist treatment centres or other health and social care professionals where appropriate.

3. Service outline

3.1 The part of the pharmacy used for provision of the service provides a sufficient level of privacy and safety and meets other locally agreed criteria.

---

[1] In this Service Specification it is assumed that instalment dispensing is provided for by the provisions of the Dispensing or Repeat Dispensing Essential Services. If this is not the case for a particular medicine which may be included in the service, local arrangements will need to be developed.

3.2 The pharmacy will present the medicine to the service user in a suitable receptacle and will provide the service user with water to facilitate administration and/or reduce the risk of doses being held in the mouth.

3.3 Terms of agreement are set up between the prescriber, pharmacist and patient (a three-way agreement) to agree how the service will operate, what constitutes acceptable behaviour by the client, and what action will be taken by the GP and pharmacist if the user does not comply with the agreement. A 'four-way' agreement could also be developed which would include the specialist centre.

3.4 The pharmacy contractor has a duty to ensure that pharmacists and staff involved in the provision of the service have relevant knowledge and are appropriately trained in the operation of the service.

3.5 The pharmacy contractor has a duty to ensure that pharmacists and staff involved in the provision of the service are aware of and operate within local protocols.

3.6 The pharmacy should maintain appropriate records to ensure effective ongoing service delivery and audit.

3.7 Pharmacists will share relevant information with other health care professionals and agencies, in line with locally determined confidentiality arrangements.

3.8 The PCO should arrange at least one contractor meeting per year to promote service development and update the knowledge of pharmacy staff.

3.9 The PCO will need to provide a framework for the recording of relevant service information for the purposes of audit and the claiming of payment.

3.10 The PCO will need to provide details of relevant referral points which pharmacy staff can use to signpost service users who require further assistance.

3.11 The PCO should consider obtaining or producing health promotion material relevant to the service users and making this available to pharmacies.

4. Suggested Quality Indicators

4.1 The pharmacy has appropriate PCO provided health promotion material available for the user group and promotes its uptake.

4.2 The pharmacy reviews its standard operating procedures and the referral pathways for the service on an annual basis.

4.3 The pharmacy can demonstrate that pharmacists and staff involved in the provision of the service have undertaken CPD relevant to this service.

4.4 The pharmacy participates in an annual PCO organised audit of service provision.

4.5 The pharmacy co-operates with any locally agreed PCO-led assessment of service user experience.

Background information – *not part of the service specification*

Current guidelines[2] recommend all new treatment of opiate dependence be subject to supervised consumption for the first three months or a period considered appropriate by the prescriber. The rationale for this recommendation is to provide routine and structure for the client, helping to promote a move away from chaotic and risky behaviour.

Supervision of the consumption of medicines used in the treatment of people with mental illness can in a similar way help to reduce chaotic and risky behaviour. Regular contact with the pharmacist and pharmacy staff can help to reduce the social isolation felt by many people with mental illness. Pharmacists and their staff are well placed to spot the deterioration of a person's mental state and alert other members of the health care team to the person's need for further support if appropriate.

Tuberculosis is becoming an increasing problem in many parts of the country, especially among socially disadvantaged groups such as the homeless. The effective treatment of tuberculosis and the prevention of acquired drug resistance relies on full compliance with medication treatment regimens. 'Directly Observed Therapy Schemes' (DOTS) have been used in many countries to improve compliance. A comparison of self treatment versus various forms of DOT has shown that completion of treatment is significantly higher when the treatment is supervised.[3]

An example claim/audit form and 'three-way' agreement form are provided with this service specification which could be adopted locally by PCOs.

Background information for Drug Action Team (DAT) commissioners:
Service Specification Tier (2 or 3), Pharmaceutical Services for Drug Users, National Treatment Agency for Substance Misuse, 2005, www.nta.nhs.uk

[2] 'Drug misuse and dependence: guidelines on clinical management' Department of Health (1999)
[3] Chaulk CP, Kazandjian VA. Directly observed therapy for treatment completion of pulmonary tuberculosis: consensus statement of the Public Health Tuberculosis Guidelines Panel. *JAMA* 1998; 279: 943-948

CPPE training which may support this service: Opiate treatment: Supporting pharmacists for improved patient care open learning Public Health – drug users, harm reduction workshop Mental health workshop series

APPENDIX EIGHT

EN2: ENHANCED SERVICE SPECIFICATION – NEEDLE AND SYRINGE EXCHANGE

NHS Community Pharmacy Contractual Framework

Enhanced Service – Needle & Syringe Exchange

1. Service description

1.1 Pharmacies will provide access to sterile needles and syringes, and sharps containers for return of used equipment. Where agreed locally, associated materials, for example condoms, citric acid and swabs, to promote safe injecting practice and reduce transmission of infections by substance misusers will be provided.

1.2 Pharmacies will offer a user-friendly, non-judgmental, client-centred and confidential service.

1.3 Used equipment is normally returned by the service user for safe disposal.

1.4 The service user will be provided with appropriate health promotion materials.

1.5 The pharmacy will provide support and advice to the user, including referral to other health and social care professionals and specialist drug and alcohol treatment services where appropriate.

1.6 The pharmacy will promote safe practice to the user, including advice on sexual health and STIs, HIV and Hepatitis C transmission and Hepatitis B immunisation.

2. Aims and intended service outcomes

2.1 To assist the service users to remain healthy until they are ready and willing to cease injecting and ultimately achieve a drug-free life with appropriate support

2.2 To protect health and reduce the rate of blood-borne infections and drug related deaths among service users:

- by reducing the rate of sharing and other high risk injecting behaviours;
- by providing sterile injecting equipment and other support;
- by promoting safer injecting practices; and
- by providing and reinforcing harm reduction messages including safe sex advice and advice on overdose prevention (e.g. risks of poly-drug use and alcohol use).

2.3 To improve the health of local communities by preventing the spread of blood-borne infections by ensuring the safe disposal of used injecting equipment.

2.4 To help service users access treatment by offering referral to specialist drug and alcohol treatment centres and health and social care professionals where appropriate.

2.5 To aim to maximise the access and retention of all injectors, especially the highly socially excluded.

2.6 To help service users access other health and social care and to act as a gateway to other services (e.g. key working, prescribing, hepatitis B immunisation, hepatitis and HIV screening, primary care services etc).

3. Service outline

3.1 The part of the pharmacy used for provision of the service provides a sufficient level of privacy and safety and meets other locally agreed criteria.

3.2 The pharmacy contractor has a duty to ensure that pharmacists and staff involved in the provision of the service have relevant knowledge and are appropriately trained in the operation of the service.

3.3 The pharmacy contractor has a duty to ensure that pharmacists and staff involved in the provision of the service are aware of and operate within local protocols.

3.4 The pharmacy will allocate a safe place to store equipment and returns for safe onward disposal. The storage containers provided by the PCO commissioned clinical waste disposal service will be used to store returned used equipment.

3.5 The pharmacy contractor should ensure that their staff are made aware of the risk associated with the handling of returned used equipment and the correct procedures used to minimise those risks. A needle stick injury procedure should be in place.

3.6 The pharmacy should maintain appropriate records to ensure effective ongoing service delivery and audit.

3.7 Appropriate protective equipment, including gloves, overalls and materials to deal with spillages, should be readily available close to the storage site.

3.8 The pharmacy should clearly display the national scheme logo or a local logo indicating participation in the service.

3.9 Staff involved in the delivery of this service should be offered immunisation for Hepatitis B.

3.10 Pharmacists will share relevant information with other health care professionals and agencies, in line with locally determined confidentiality arrangements.

3.11 The PCO should arrange at least one contractor meeting per year to promote service development and update the knowledge of pharmacy staff.

3.12 The PCO will provide the exchange packs and associated materials and will commission a clinical waste disposal service for each participating pharmacy. The frequency of waste collection should be agreed to ensure there is not an

unacceptable build up of clinical waste on the pharmacy premises.

3.13 The PCO will need to provide a framework for the recording of relevant service information for the purposes of audit and the claiming of payment.

3.14 The PCO will need to provide details of relevant referral points which pharmacy staff can use to signpost service users who require further assistance.

3.15 The PCO should consider obtaining or producing health promotion material relevant to the service users and making this available to pharmacies.

4. Suggested Quality Indicators

4.1 The pharmacy has appropriate PCO provided health promotion material available for the user group and promotes its uptake.

4.2 The pharmacy reviews its standard operating procedures and the referral pathways for the service on an annual basis.

4.3 The pharmacy can demonstrate that pharmacists and staff involved in the provision of the service have undertaken CPD relevant to this service.

4.4 The pharmacy can demonstrate that the rate of return of used equipment meets locally agreed targets.

4.5 The pharmacy participates in an annual PCO organised audit of service provision.

4.6 The pharmacy co-operates with any locally agreed PCO-led assessment of service user experience.

Background information – *not part of the service specification*

The National Treatment Agency for Substance Misuse service specification for Needle Exchange and Harm Reduction sets out a series of objectives for needle exchange services generally, these apply to services commissioned from community pharmacy and are reflected within the service specification:

- To offer user-friendly, non-judgmental, client-centred and confidential services;
- To assist the service users to remain healthy until they are ready and willing to cease injecting and ultimately achieve a drug-free life with appropriate support;
- To reduce the rate of sharing and other high risk injecting behaviours by providing sterile injecting equipment and other support;
- To reduce the rate of blood-borne infections among drug users;

- To reduce drug-related deaths (immediate death through overdose and long-term such as blood borne infections);
- To promote safer injecting practices;
- To provide focused harm reduction advice and initiatives, including advice on overdose prevention (e.g. risks of poly-drug use and alcohol use);
- To provide and reinforce harm reduction messages;
- To help service users access drug treatment to refer to other specialist drug (and alcohol) treatment services;
- To help service users access other health and social care and to act as a gateway to other services (e.g. key working, prescribing, hepatitis B immunisation, hepatitis and HIV screening, primary care services etc);
- To facilitate access to primary care where relevant;
- To ensure the safe disposal of used injecting equipment;
- To prevent initiation into injecting and to encourage alternatives to injecting;
- To aim to maximise the access and retention of all injectors, especially the highly socially excluded, through the low-threshold nature of service delivery and interventions provided; and
- To improve the health of local communities by preventing the spread of blood-borne viruses and by reducing the rate of discarded used injecting equipment.

There is good evidence that community pharmacy based needle exchange services can complement and support other needle exchange and harm minimisation initiatives commissioned by drug treatment agencies.

Background information for Drug Action Team (DAT) commissioners:
Service Specification Tier (2 or 3), Pharmaceutical Services for Drug Users, National Treatment Agency for Substance Misuse, 2005, www.nta.nhs.uk

National scheme logo: 

CPPE training which may support this service:

Opiate treatment: Supporting pharmacists for improved patient care open learning
Public Health – drug users, harm reduction workshop

APPENDIX NINE

ABSTRACTS OF POSTER PRESENTATIONS

1. INTERATIONAL CONFERENCE ON THE REDUCTION OF DRUG RELATED HARM. BELFAST, 2005.

Levels of Pharmacy Based Needle Exchange (PBNX) in South West England – cause for concern?

Background and Objectives

In 1995, Sheridan *et al* (1996) surveyed a sample of community pharmacies in England and Wales. They reported that 18.9% of pharmacies who responded participated in a needle exchange scheme. This study aims to quantify current levels of needle exchange in community pharmacies in the South West of England.

Design

A self completion postal questionnaire was sent to all community pharmacies in the strategic health authority areas of Avon, Gloucestershire and Wiltshire; Dorset and Somerset; and South West Peninsula (n=903). Descriptive data were collected on demography and drug misuse services provided.

Results

A response rate of 77.9% was achieved. Ninety-seven pharmacies (17.9%) who replied to the questionnaire provided PBNX to an average of 22.1 clients per week. The most common reason given for providing the service was 'harm reduction'. 52.3% of pharmacies currently sold or were willing to sell needles and syringes to drug misusers, but only 161 drug misusers had asked to buy needles and syringes in the week prior to the questionnaire being filled out.

Conclusion

It is concerning that levels of PBNX appear to have remained static since the last survey of community pharmacists was carried out and few drug misusers seem willing to buy injecting equipment from pharmacies. The availability of a community pharmacy on 'every high street' makes them valuable resource in the fight against blood borne diseases. Further work is required to understand how pharmacists can be encouraged to provide needle exchange services.

2. HEALTH SERVICES RESEARCH AND PHARMACY PRACTICE CONFERENCE. BATH, 2006

Facilitators and Barriers to a Community Pharmacy Model of Care for the provision of services to drug misusers – a qualitative study.

Britton, R.M. and Scott, J.
Clinical Pharmacy and Pharmacy Practice Group, Department of Pharmacy and Pharmacology, University of Bath, BATH, BA2 7AY, UK. (prprmw@bath.ac.uk)

Introduction

In 2002, the National Treatment Agency for Substance Misuse (NTA) published its 'Models of Care' document which described the range of services that should be available in every drug action team (DAT) area in England. The Models of Care document advocates primary care based treatment services for drug misusers and mentions community pharmacy based services such as needle exchange and supervised methadone consumption but does not discuss the standards by which these services should be provided. This research aims to inform a community pharmacy 'Model of Care' and is part of a larger project employing both quantitative and qualitative methods. The study reported here was preceded by a large postal questionnaire which was sent to 903 community pharmacies in the South West of England. On the basis of the questionnaire findings, qualitative interviews were then undertaken to further explore the key factors identified in the questionnaire. In order to propose a new 'Model of Care' it is important to understand what would facilitate the models use and what may inhibit community pharmacists from using it.

Method

This was a semi-structured interview study that was designed to understand the experiences of community pharmacists who provide drug misuse services. Approval was gained from the Central and South Bristol Research Ethics Committee before commencement of the study. Community pharmacists were recruited as a result of their indication of willingness to participate in further research in their replies to the preceding postal questionnaire. Thirty one interviews were carried out between September 2004 and January 2005. All were transcribed *verbatim* and read. The first 20 transcripts were included in the final analysis as no new themes or points for discussion was found in the remaining transcripts. Analysis was carried out using the software program 'NVivo' and themes were generated using Interpretative Phenominological Analysis (IPA).

Results

Nine major themes were identified from the analysis of the interview transcripts. One of these themes was named 'Perceived facilitators and barriers to a Pharmacy Model of Care' and this abstract focuses on this theme. Participants felt that training, teamwork and the new pharmacy contract would help facilitate a Model of Care whilst identifying that the attitude of pharmacists and their staff towards drug misusers, the perceived effect of drug misusers on the pharmacy business, a lack of training and wider understanding of drug misuse, a lack of understanding of the pharmacists' role in caring for drug misusers by other healthcare professionals and a lack of two-way information sharing between prescriber/ key worker and

pharmacists were potential barriers to the successful implementation of a Model of Care.

Conclusion

This qualitative study has provided some important considerations for the proposal and implementation of a Model of Care for community pharmacy services to drug misusers. One important facilitator is training, as a lack of training was also identified as a potential barrier. The Model of Care should therefore contain a list of training needs for pharmacists who provide drug misuse services. The other barriers must be considered and ways of limiting their impact on the implementation of the Model of Care will be considered in future work.

APPENDIX TEN

ABSTRACTS FOR CONFERENCE PRESENTATIONS

1. NATIONAL DRUG TREATMENT CONFERENCE. LONDON, 2005.

'Working with drug users : dangers, myths and reality & Supervised consumption with dignity: an impossibility?'

Community pharmacies are becoming increasingly involved in dispensing methadone for the treatment of heroin addiction. In addition, current guidelines suggest that in the early stages of treatment (3-6 months) a methadone prescription should be dispensed daily, with a requirement that the client be supervised taking their medication. Therefore, the community pharmacist may often be the healthcare professional who is most regular contact with an individual on a methadone script and in some cases may be the only healthcare professional that an individual not receiving treatment sees. (via needle syringe exchange schemes)

Working with drug misusers can be challenging; the extra workload required to dispense sometimes fairly large quantities of Controlled Drugs, the storage arrangements for needle exchange packs and having a confidential area for supervised consumption as well as dealing with and trying to understand the problems that drug users face.

Some drug users shoplift and others are abusive and threatening, whilst other drug users write letters of thanks for your help at Christmas and name their new-born baby after you. Working with drug users can be very frustrating but at times immensely rewarding.

Whatever your view of providing services to drug users – one thing is clear, and that is that as a profession we must ensure that our practice in this area is of a high standard with the needs of the client paramount.

In this meeting we will discuss and debate how best we can provide pharmaceutical services to drug users as well as hearing about the reality of working these clients in a community setting.

2. NATIONAL DRUG TREATMENT CONFERENCE. GLASGOW, 2006

Drug Treatment and the Role of the Pharmacist

Pharmacists play an important part in the care of drug misusers, be it by providing needle exchange services or by dispensing and supervising consumption of methadone or other substitute treatments.

In their updated guidance on the use of methadone for the treatment of opioid dependence in primary care, the Royal College of General Practitioners stresses the importance of the multidisciplinary team, with the pharmacist included in this team. They state, *'Pharmacists are key individuals in the success of methadone treatment. They will see the patient much more often than the prescriber and can provide additional important support. Close liaison with pharmacists should be maintained.'*

It follows, therefore, that in order to operate a successful treatment program, there must be clear lines of communication between pharmacist, prescriber and other relevant health and social care professionals, as well structured support mechanisms for pharmacists involved in providing substance misuse treatment.

This parallel session will review research on pharmacists' (based in the South West of England) experiences of support services and communication with prescribers. The recommendations contained in the Scottish Executive document "Prevention and Treatment of Substance Misuse. Delivering the Right Medicine: A Strategy for Pharmaceutical Care in Scotland" will be outlined with specific examples drawn from developments in Addiction Services in Glasgow. Finally, the role of the Scottish specialist pharmacist in substance misuse will be discussed.

APPENDIX ELEVEN

BIOGRAPHICAL DETAILS OF INTERVIEWEES

Pharmacist Interviewees

Pseudonym	Age	Years on Register	Location	StHA area
Harry	42	20	Small Town	DS
Nigel	38	17	Urban	AGW
Ellie	30	8	City Centre	AGW
Simon	48	26	Urban	AGW
Adam	26	4	Small Town	AGW
Greg	57	36	Small Town	SWP
Donald	54	33	Small Town	DS
Wilma	47	16	Village	AGW
Alf	33	12	Village	AGW
Rachel	52	30	Urban	AGW
Kath	50	28	Urban	DS
Carmel	50	27	Urban	AGW
Lottie	29	8	City Centre	AGW
George	47	24	Small Town	AGW
Jackie	26	5	City Centre	SWP
Sandra	44	20	Rural	DS
Mike	36	10	Rural	DS
Paul	50	29	Small Town	DS
Maxwell	48	25	Urban	SWP
Brad	36	15	Small Town	DS
Vicky	49	25	Village	SWP
Ken	51	30	Small Town	AGW
Jack	30	8	Village	SWP
Norman	29	5	Urban	SWP
Harriet	39	15	Urban	SWP
Grant	32	7	Urban	SWP
David	31	9	Small Town	SWP
Nick	62	39	Small Town	DS
Malcolm	48	25	Small Town	DS
Greg	53	30	City Centre	SWP

Service User Interviewees

Pseudonym	Age	Years in Drug Treatment	Location	StHA area
Sarah	24	3	Small Town	AGW
Cheryl	34	12	City Centre	SWP
Adam	43	15	Urban	AGW
Kate	39	10	City Centre	SWP
Michelle	40	1	Suburban	DS
Marcus	29	6	Suburban	DS
John	38	7	Small Town	DS
Emily	21	3	Urban	AGW
Patrick	52	>20	Urban	AGW
Pamela	32	11	Suburban	DS
Michael	27	4	Small Town	AGW
Alex	40	8	Urban	AGW
Natalie	18	<1	Urban	AGW
Helen	16	<1	City Centre	SWP
Sam	29	7	Small Town	DS

* AGW – Avon, Gloucestershire and Wiltshire, DS – Dorset and Somerset, SWP – South West Peninsula Strategic Health Authority (StHA)